

Office of the Purchasing Agent 2300 Bloomdale Road Suite 3160 McKinney, Texas 75071 www.collincountytx.gov

# COLLIN COUNTY, TEXAS

ADDENDUM No. Four (4) IFB No. 2021-239

# **INVITATION FOR BID**

FOR

# CONSTRUCTION, COLLIN COUNTY ADULT DETENTION FACILITY, PHASE 1 ADDITION

DATE: AUGUST 20, 2021

NOTICE TO ALL PROSPECTIVE BIDDERS:

PLEASE MAKE THE FOLLOWING CHANGES TO THE INVITATION FOR BID:

CHANGE BID DUE DATE: FROM: AUGUST 26, 2021 AT 2:00 P.M.

TO: SEPTEMBER 9, 2021 AT 2:00 P.M.

CHANGE QUESTION DEADLINE: FROM: AUGUST 20, 2021 AT 12:00 P.M.

TO: AUGUST 30, 2021 AT 5:00 P.M.

ADD DOCUMENT: 8/17/21 ELECTRICAL ROOM SITE-WALK SIGN-IN SHEET

ADD DOCUMENT: ARCHITECT'S ADDENDUM 2

ADD DOCUMENT: SECTION 32 31 15

DELETE DOCUMENT: SECTION 09 30 10

DELETE DOCUMENT: SECTION 07 60 00

REPLACE WITH: SECTION 07 60 00 ADDEMDUM 2

DELETE DOCUMENT: SECTION 08 34 95

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DELETE DOCUMENT: SECTION 004100-BID FORM ADDENDUM 3 SECTION 004100-BID FORM ADDENDUM 4

ADD ATTRIBUTE: #23-ADDENDUM No. 4 ACKNOWLEDGEMENT

ALL OTHER TERMS AND CONDITIONS OF THE BID AND SPECIFICATIONS REMAIN THE SAME.

SINCERELY,

MICHELLE CHARNOSKI, NIGP-CPP, CPPB

PURCHASING AGENT

JDG



# IFB# 2021-239 **ELECTRICAL ROOM SITE-WALK SIGN-IN SHEET**

Project:

Construction, Collin County Adult Detention Facility, Phase 1 Addition

**Meeting Date:** 

August 17, 2021

Facilitator:

J.D. Griffin

Place/Room:

Adult Detention Facility

Name	Company	Phone	E-Mail
Tom TAYlor	MCS / HTEGHED	469.670.8644	TTAY lon eMes loregration. Co
Andrew Micklitz	Lee Lewis Construction	214-399-1585	anicklitz@leelewis. com
MICHAEL SMITH	MD ENGINEERING	469.467-0200	msnithend-eng. com
B:11 13 un kz	collin County	972-547-5340	Studee Co. collin. Tr. 45
Tracy Wilson	BSW Architects	436-302-2393	twilson@bsw-architects.com
George Ellist	JBI Eladre	940 467-6780	gestat @sBielectrica
Riley Cottrell	All Tech		rcottrelloalfechleon
Airan Mc Cornell	Velex5	963-946-1959	March. Mr. e-innellon relexe.
Coy Warner	Imperial	817-341-8886	estimating@imperial-construction
Clayton Kongable	(( ))	CC 21	(( '1
Will Lowetz	EAST FORK SERVICES	214-529-1909	Will lowetz @ Past Pork, Net
J. D. Griffin	Collin County		

# **ADDENDUM NO. 2**

# TO

# Collin Count Adult Detention Facility, Phase 1 McKinney, Texas

August 18, 2021

Project: 21913.00

From: Brinkley Sargent Wiginton Architects, Inc.

To: Bidders of Record

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents.

### **PROJECT MANUAL MODIFICATIONS**

# Item No. 1. Section 07 60 00 Flashing and Sheet Metal

A. Specification updated.

# Item No. 2. Section 08 34 95 Fire and Smoke Curtains

A. Paragraph 2.03.A was modified.

# Item No. 3. Section 08 71 00 Door Hardware

A. Added set 5.1, updated door references.

### Item No. 4. Section 09 30 10 Tile

B. This section is deleted.

### Item No. 5. Section 10 00 00 Misc. Specilaties

A. Specification updated.

## Item No. 6. Section 10 50 00 Lockers

B. Specification updated and also to include added manufacturers.

# Item No. 7. Section 14 24 47 Hydraulic Elevators

A. Specification updated.

# Item No. 8. Section 32 31 15 Site Fencing Vertical

A. Specification section added.

#### DRAWINGS MODIFICATIONS

Note to bidders on drawing modifications: Any revision made to a sheet as part of this Addendum, regardless of the scale of the modification, results in the reissuance of that full sheet. The description for the revisions follows below, but the full sheet is reissued to allow revised sheets to simply be substituted for the sheets originally issued.

**Item No. 9. Sheet – C105** 

A. Note added to sheet.

**Item No. 10. Sheet – C119** 

A. Pipe size updated.

**Item No. 11. Sheet – S201** 

A. Stoop detail at grid a updated.

**Item No. 12. Sheet – S202** 

A. Stoop detail at grid l updated.

B. Slab callout on plan 2 was updated.

**Item No. 13. Sheet – S211** 

A. Slab callout at grid c was updated.

**Item No. 14. Sheet – S212** 

A. Detail 4/S502 was added at the elevator.

B. Top of steel elevation added for the n/s corridor adjacent to existing

**Item No. 15. Sheet – S222** 

A. Expansion joint location updated at n/s corridor adjacent to existing.

**Item No. 16. Sheet – S231** 

A. Framing updated at the roof hatch.

B. Steel joists were updated to wide flanges to accommodate the future roof screen wall.

**Item No. 17. Sheet – S301** 

A. Pier type P7 was added to the schedule.

Item No. 18. Sheet – S303

A. Horizontal wall reinforcing updated on detail 8.

**Item No. 19. Sheet – S305** 

A. Slab reinforcing updated on detail 2.

B. Dba length updated on detail 6.

C. Headed stud location updated on detail 6.

Item No. 20. Sheet – S306

A. Updates were made to detail 8.

**Item No. 21. Sheet – S307** 

A. Notes were updated on detail 5, 6, 7, and 8.

**Item No. 22. Sheet – S308** 

A. Detail 3 was updated.

B. Detail 7 was updated.

**Item No. 23. Sheet – S503** 

A. Connection of the edge angle to CMU wall was updated in detail 5.

**Item No. 24. Sheet – S505** 

A. Details 8 and 9 were added.

Item No. 25. Sheet – S602

A. Updates were made to beam reinforcing for both the regular and post-tensioned beam schedules.

**Item No. 26. Sheet – A020** 

A. Window protection note updated.

B. Fire Marshal fire protection standard comments and elevator comments added.

Item No. 27. Sheet – A020, A021, A022

A. Window protection note updated.

Item No. 28. Sheet - A201, A210, A222, A223, A281

A. Updated plan at fire room door.

**Item No. 29. Sheet – A411** 

A. Updated finish note and fire door.

Item No. 30. Sheet – A702

A. Door 1029 added.

B. Updated door hardware.

Item No. 31. Sheet – A800

A. Finish note added.

**Item No. 32. Sheet – D213** 

A. Tag added.

Item No. 33. Sheet – D702

A. Ratings updated.

Item No. 34. Sheet – ES223,

A. Relocated camera #C002 based on architectural revisions.

 Relocated security door intercoms and door control symbol based on architectural changes to door DST01A.

C. Relocated Security door monitor symbols based on architectural changes to door 1025.

Item No. 35. Sheet – M003

A. MDE Revision: Added UH-18.

**Item No. 36. Sheet – M004** 

A. MDE Revision: Removed M-6F, M-8E, & M-9F.

Item No. 37. Sheet – M006, M007, M008, M009, M010, M011, & M012

A. MDE Revision: Added minimum outside air calculations.

Item No. 38. Sheet – M120

A. MDE Revision: Revised General Note 2.

**Item No. 39. Sheet – M121** 

A. MDE Revision: Revised General Note 2.

**Item No. 40. Sheet – M122** 

A. MDE Revision: Revised General Note 2.

**Item No. 41. Sheet – M201** 

A. MDE Revision: Removed tap into Stair ST03. Revised air distribution accordingly.

#### **Item No. 42. Sheet – M202**

- A. MDE Revision: Removed tap into Stair ST06 & ST07. Revised air distribution accordingly. Provided transfer duct from 1314 to 1401
- B. Added UH-18 in Pump Room 1029.

### **Item No. 43. Sheet – M212**

A. MDE Revision: Removed tap into Stair ST05, ST07, & ST06. Revised air distribution accordingly.

#### **Item No. 44. Sheet – M221**

A. MDE Revision: Removed tap into Stair ST02 & ST03. Removed motorized damper M-6F & M-8E.

### **Item No. 45. Sheet – M222**

A. MDE Revision: Removed tap into Stair ST01. Removed motorized damper M-9F.

#### **Item No. 46. Sheet – M302**

A. MDE Revision: Added UH-18 & associated hydronic piping.

#### **Item No. 47. Sheet – M403**

A. MDE Revision: Revised Smoke Removal Schematic and Matrix for removal of motorized damper M-6F, M-8E, & M-9F.

#### **Item No. 48. Sheet – M501**

A. MDE Revision: Revised Mechanical Piping Flow Diagram for added UH-18.

#### Item No. 49. Sheet – M503

A. MDE Revision: Added Flow Diagram – AHU. Revised control points matrix.

#### **Item No. 50. Sheet – M504**

A. MDE Revision: Revised control points matrix.

# **Item No. 51. Sheet – M505**

A. MDE Revision: Revised control points matrix.

# **Item No. 52. Sheet – M506**

A. MDE Revision: Revised control points matrix.

#### **Item No. 53. Sheet – M507**

A. MDE Revision: Revised control points matrix.

# Item No. 54. Sheet – FP202, FP204, FP206

A. MDE Revision: added city comment note to sheet, revised FP-1 fire pump schedule

# Item No. 55. Sheet – FP201, FP202, FP203, FP204, FP205, FP206, FP207

A. MDE Revision: added fire protection standard note from city comments

#### **Item No. 56. Sheet – P003**

A. MDE Revision: revised WS-1 water softener model and revised main water pipe size on water demand schedule from 3" to new 4"

# Item No. 57. Sheet – P201, P202, P211, P212

A. MDE Revision: Revised underfloor and above floor from lower-level reflecting relocated water softener and revised water pump and fire pump room per city comment

Item No. 58. Sheet – P301, P302

A. MDE Revision: Revised pressure piping from lower-level reflecting relocated water softener and revised water pump and fire pump room per city comment

**Item No. 59. Sheet – E013** 

A. MDE Revision: Updated panel schedule L1B to reflect circuit changes.

**Item No. 60. Sheet – E015** 

A. MDE Revision: Updated heater schedule and damper schedule.

**Item No. 61. Sheet – E202** 

A. MDE Revision: Updated lighting and switches in 1025 and 1029 to reflect background changes.

Item No. 62. Sheet – E201, E211, E212, E222, E311

A. MDE Revision: General note added.

**Item No. 63. Sheet – E221** 

A. MDE Revision: Moved light fixture in mechanical room corridor to wall.

**Item No. 64. Sheet – E302** 

A. MDE Revision: Moved receptacles in 1025 and added receptacle to 1029 to reflect background changes.

**Item No. 65. Sheet – E401** 

A. MDE Revision: Moved receptacle for Water softener to 1028 to reflect plumbing changes.

**Item No. 66. Sheet – E402** 

A. MDE Revision: Moved devices to reflect background changes. Moved pump BP-1 to 1029.

Item No. 67. Sheet – Sheet – ES301

A. Modified UPS Bypass text from Div. 26 to Div. 28.

Item No. 68. Sheet – Sheet – ES403

A. Modified UPS to be provided from by Div. 26 to Div. 28.

# **ADDENDUM 2 ATTACHMENTS:**

Specification Sections as listed above

Drawing Sheets as listed above.

# END OF ADDENDUM

#### PART I - GENERAL

#### 1.1 SUMMARY

- A. Provide wire mesh fence system where shown on the drawings, as specified herein, and as needed for a complete and proper installation.
  - 1. 15 foot tall above grade standard design security fence
  - 2. Fence fabric to extend 36" below grade. Provide anti- corrosive coating at fence posts and buried portions.
  - 3. 18" diameter x 6' deep reinforced 3,000 psf concrete fence post foundations; starting 36" below grade.

#### B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, Conditions of the Contract; Division 1, and other sections of these specifications.

# C. References for material specifications:

- 1. American Society for Testing and Materials (ASTM) Standards:
  - A90 Test method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles.
  - A392 Specification for Zinc-Coated Steel Chain-Link Fence Fabric.
  - A428 Test Method for Weight of Coating on Aluminum-Coated Iron or Steel Articles.
  - A446 Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality.
  - A525 Specification for General Requirements for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process.
  - A569 Specification for Steel, Carbon (0.15 Maximum Percent), Hot-Rolled Sheet Strip, Commercial Quality.
  - A817 Specification for Metallic-Coated Steel Wire for Chain Link Fence Fabric.
  - C94 Ready Mixed Concrete.
  - F626 Specification for Fence Fittings.

# 2. Federal Specifications (Fed. Spec.):

RR-F-191H/GEN Fencing, Wire and Post, Metal RR-F-191/1D Fencing, Wire and Post, Metal RR-F-191/2D Fencing, Wire and Post, Metal RR-F-191/3D Fencing, Wire and Post, Metal

### 1.2 SUBMITTALS

# A. Submit the following:

RR-F-191/4D

1. Materials list of items proposed to be provided under this section;

Fencing, Wire and Post, Metal

- 2. Manufacturer's specifications and other data needed to prove compliance with the specific requirements;
- 3. Shop Drawings showing all fencing components and details of fencing, gates, post tops, tensions bands and bars, sleeves and corner post attachments; footings. These Shop Drawings shall be accompanied by a layout drawing showing spacing of posts and location of gate, corner, end and pull posts.
- 4. Project submittals shall include layout of the fencing and a fence-line profile and appropriate details. Requirements such as height of fence, gate style(s) and sizes shall be indicated. Where electrical-equipment-fence enclosures are required, the Contract Drawings and specifications shall provide for such features as clearance between fence and electrical equipment and wiring, clearance between fence and equipment foundations to allow for proper width of truck aisles, and positive stops to prevent gates from swinging inward or sliding off track. If the area to be fenced has an irregular surface, drainage structures and fence-line grading for rugged areas shall be identified, and the profile with pertinent information shall be included in the fencing layout.

### 1.3 QUALITY ASSURANCE

A. Contractors shall show proof of experience for anti- climb type fence installations by submitting an affidavit from the manufacturer stating the date of instruction. Contractors not having this affidavit or otherwise unfamiliar with this type of fence installation shall provide a manufacturer's representative with a minimum of 5 years of experience on the job site at the commencement of installation to instruct the contractor's personnel in the proper methods of installation. Upon completion, an inspection shall be made by the manufacturer representative to assure proper workmanship.

### 1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver fencing materials to the site in an undamaged condition. Carefully store materials off the ground to provide proper protection against oxidation caused by ground contact.

#### PART 2 - PRODUCTS

- 2.1 MANUFACTURERS/FABRICATORS; subject to the requirements stated herein:
  - A. Riverdale, www.riverdale.com 415.308.1235 [Basis of Design]

### 2.2 MATERIALS COATING

- A. On steel framework and appurtenances, provide galvanized finish with not less than the following weight of zinc per square foot:
  - 1. Tube: 1.1 +/- .10 ounce per square foot, complying with ASTM A525
  - 2. Appurtenances Per ASTM F626
- B. Provide finish with not less than the following weight of zinc or aluminum per square foot, as indicated below:
  - 1. For wire mesh minimum conforming to ASTM A-641.
  - 2. For posts and appurtances, comply with ASTM A817, using either aluminized, Type I or galvanized, Type II. Minimum 2 oz. per square foot zinc per side conforming to ASTM 1043.

# 2.3 FABRIC

#### A. Properties

- 1. Dimensional tolerance: +/- 1/8"
- 2. Spacing tolerance: +/- 1/16".
- 3. Permissible vertical bow: 2".
- 4. Savage trim 0 min. /1/16" max
- 5. Shear tabs: 0 min. /1/8" max
- 6. Panel weight  $\sim 105$  lbs.
- 7. Panel dimensions and spaces expressed as center to center of wires unless specified differently.
- 8. Panel size: 87" wide x height as shown on drawings.
- 9. Gauge: 8 ga.
- 10. Panel profile: intermediate vertical oriented members at 3".
- 11. Posts at 7' O.C.
- 12. Finish: GAW [galvanized after welding].
- 13. Clamps, including rail to panel and other hardware per manufacturer's system
- C posts: 45K min. yield steel per ASTM A570, Grade 45, coated with min. 2 oz. zinc per sq. ft. per ASTM F1043-Type A
- 15. Flat bars at splices/ seams: 60 k min yield steel per ASTM A 470; depth as required for height of panel; wall thickness 0.150.

# 2.4 POST, RAILS, ASSOCIATED ITEMS

A. End, Corner, Slope, Line and Gate Posts: Provide at least the following minimum sizes and weights:

Material and dimensions: Lbs per lin ft:

Class 1, steel pipe, Grade B 6.56 Wall thickness: min. .160"

Yield Strength: 50,000 psi min (RR-F-191)

Comply with RR-F-191 Outside dimension: 4.0"

B. Rails: Provide at least the following minimum size and weight:

Material and Dimensions: Lbs per lin ft: Class 1, steel pipe, Grade A or B 2.27/1.82

Wall Thickness: .14"(A), .11"(B)

Yield Strength: 25,000 psi min (A) 50,000 psi min (B)

Comply with RR-F-191

Outside dimension: min. 1-5/8"

Provide an intermediate rail at all fences over 7'-6" tall

#### C. Post tops:

- 1. Provide steel post tops designed as weather tight closure caps.
- 2. Provide one cap for each post.
- 3. Do not use loop caps.

# 2.6 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Concrete: ASTM C 94 3000-psi compressive strength at 28 days, using 3/8" maximum size aggregate. Site mixed concrete will be acceptable. Grout shall consist of one part cement to three parts clean, well-graded sand and the minimum amount of water required to produce a workable mix.
- B. Razor Wire: Atkore Razor Ribbon Helical Barbed Tape [basis of design]. 18" diameter; 33 coil loops; stainless steel strip material and core wire; 18" loop spacing; ASTM F1910, Item 1.

# PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.
- B. Establish a graded fence line prior to the installation of fencing. The ground along the line of the fence shall be solid, and dirt fill used to establish the fence line shall be thoroughly compacted. The fence line shall be cleared of all trees, brush or other obstacles that will interfere with the fencing or facilitate breach.

# 3.2 INSTALLATION

#### A. General:

- 1. Install posts at widths to match panel sizes, less required overlap.
- 2. For all terminal points in the fence line, including ends, corners, gates and significant changes in grade.
- 3. Install corner or pull posts where changes in direction exceed 30 degrees or significant grade changes are encountered.
- 4. Corners and terminals are to be executed in a manner, consistent with the drawings, which absolutely precludes hand/foot holds for the length of the mesh.
- 5. Terminal posts at buildings shall be finished, consistent with drawings, to provide closure to within .25" of the building.
- 6. Mesh shall be continuous at the attack side of the fence; no exposed posts or other items that could be used to climb on.

# B. Excavating:

- 1. Drill holes for post footings in firm, undisturbed or compacted soil, strictly adhering to the dimensions and spacing shown in the Project Drawings.
- 2. Where the footing is in plain soil, excavate a 15" minimum diameter hole to a depth of 4' 0" below the mesh line.
- 3. Where bedrock (solid rock) is encountered, bore a hole with a diameter, which is 2" greater than that of the sleeve/bolt assembly. A typical sleeve/bolt assembly has a 4.5" diameter; the hole should have a 6.5" diameter. The depth of the hole in the rock shall be the lesser of the following dimensions: 4' total depth of footing or 18" depth in solid rock.
- 4. Spread soil from excavations uniformly adjacent to the fence line, or on adjacent areas of the site if so directed. (note engineering requirements may change footing dimensions)

### C. Setting sleeve/bolt assemblies:

- Remove loose and foreign materials from sides and bottoms of holes, and moisten soil prior to placing concrete.
- 2. Center and align sleeve/bolt assemblies in holes. Ensure that sleeve/bolt assemblies are plumb on two perpendicular planes.
- 3. Ensure that the support bolt at the bottom of the sleeve is the correct depth below grade level, as shown in the drawings.
- 4. Place concrete around sleeve/bolt assemblies in a continuous pour, and vibrate or tamp for consolidation.
- 5. Grout-in those sleeve/bolt assemblies, which are set into concrete constructions or rock excavations, using non- shrink portland cement grout or other grouting material approved by the designer.
- 6. Seal gap between post and sleeve with grout or approved sealant to prevent water intrusion.

### D. Concrete strength

Allow concrete to attain at least 75% of its minimum 28-day strength before rails and fabric are installed.

#### E. Rails and bracing:

- 1. Install fence using horizontal rails, as indicated in the drawings.
- 2. Install rails using boulevard clamps, end rail clamps and rail ends; following manufacturer installation guidelines.
- Brace end, corner, gate and pull posts to the nearest posts with horizontal braces used as compression members.

#### F. Installing Mesh:

- 1. Install mesh on the secure side of the fence, as indicated by drawings; following manufacturer guidelines.
- 2. Install mesh so the top edge extends a minimum of 4" beyond post cap

#### G. Miscellaneous:

- 1. Peen the ends of bolts to prevent removal of nuts. Weld nuts where necessary.
- Repair coatings damaged in the shop or during field erection, using a repair compound applied in accordance with its manufacturer's recommendations.

END OF SECTION

### PART 1 - GENERAL

# 1.01 SUMMARY

- A. Section Includes
  - 1. Parapet cap flashing.
  - 2. Counter flashings over base flashings.
  - 3. Roof, sill and cant strip protection.
  - 4. Counter flashings for roof mounted equipment, screens and hatches.
- B. Related Sections
  - 1. Divison 3: Precast Concrete.
  - 2. Section 04 22 00: Brick.
  - 3. Section 06 10 00: Rough Carpentry.4. Section 07 54 23: TPO Roofing.
  - 5. Section 07 92 00: Sealants and Caulking.

### 1.02 REFERENCES

- A. ASTM A 526 Steel sheet, zinc-coated (galvanized) by the hot-dip process, commercial quality.
- B. ASTM A 527 Steel sheet, zinc-coated (galvanized) by the hot-dip process, lock forming quality.
- C. ASTM B 209 Aluminum alloy sheet and plate.
- D. FS TT S 00120C Sealing compound: Elastomeric type, single component.

#### 1.03 SHOP DRAWINGS

- A. Submit shop drawings in accordance with Section 01 30 00.
- B. Clearly detail shaping, jointing, the length of sections, fastening, and installation details, thickness and type of metal, expansion joints and methods of anchoring to adjacent work.

## 1.04 WARRANTY

- A. Provide Owner with a warranty stating that metal flashings will properly shed water for a minimum period of two (2) years from the date of Substantial Completion of the Work, as certified by Architect, and that damage resulting from failure to provide above stated performances will be repaired to satisfaction of Owner at no additional cost.
- B. Provide coating warranty for at least 20 years for fade, failure and other variables available from the manufacturer.

#### PART 2 – PRODUCTS

# 2.01 SHEET METALS

- A. Galvanized Steel: ASTM A 526, minimum 24 gauge thick, extra smooth, minimum spangle, tension leveled, hot dipped galv. steel with coil coated 70% Kynar 500/ Hylar 5000 resin based fluoropolymer FSFcoating finish of 1.0 mil DFT with a wash coat of .35 mil DFT on reverse side; 20-year warranty; complying with AAMA 2605.
  - 1. Color as selected.
- B. Galvanized Steel: ASTM A 526, minimum 24 gauge thick, hot-dipped galvanized steel G-90, Commercial quality, paint grip type. Utilize at areas not visible to public view.

# 2.02 COMPONENTS

- A. Fasteners: Concealed hook strip or clip type, of the same material as flashings, sized to suit the application.
- B. Sealant: One component, non-priming; premium grade advance polymer sealant, conforming at a minimum to FD TT S 00230; non-staining, non-bleeding, non-sagging, of the color selected by Architect. Titebond WeatherMaster Metal Roof Sealant [basis of design]. Plus or minus 50% joint movement; weather and aging resistant; extrusion down to 0 degrees F; UV resistant; <1% shrinkage.
- C. Solder and Flux: Type recommended for materials being used.
- D. Nails, Rivets and Screws: Furnish in metal type compatible with sheet metal.
- E. Cleats: .06-inch-thick aluminum, mill finish.

#### 2.03 ACCESSORY MATERIALS

#### A. Formed Copings

- 1. Coil coated Kynar-based resin system 24 gauge galvanized steel. Formed in 10-foot sections; lock exterior edges over continuous cleats to secure to the substrate.
- 2. Extend sheet roofing over the top of the wall and down the face until it overlaps the weather barrier- to provide a continuous weather/ air barrier. At locations without sheet roofing utilize peel and stick type membrane.
- 3. Cross Joints: Provide an 'under' type splice joint of 8" wide coping metal centered under 3/4" wide joint.
- 4. Coping Corners: Mitered, seamed and permanently sealed; extend 2'-0" back from a corner in each direction.
- 5. Bottom edges of the aprons on the copings, both front and a back side, shall be hemmed and locked over with minimum 24 gauge galvanized steel cleats- at extensions over extending over the gap and masonry utilize min. 20 gauge material. All underside support framing/ cleats are intended to run continuous- with splices occurring staggered to coping splice joints. The cleats shall be secured to parapet with screws at 12" o.c.

# B. Metal Counter and Through-Wall Flashing

- 1. 26 gauge galvanized (coil coated if visible to view) steel formed in 8-foot sections; lap end joints 3 inches; do not solder joints; make continuous angles; overlap base flashing a minimum of 3 inches. Extend thru-wall flashing at counterflashing through entire veneer thickness and provide water-resistant connection to the substrate.
- 2. Fabricate two-piece type for ease in re-roofing.
- 3. Provide L-shaped inside and outside corner pieces extending 4 inches each way from the corner.

# C. Umbrella Shields

- 1. 24 gauge galvanized steel, formed from one piece sheet metal; joint lapped 1/2 inch, pop-riveted and soldered; shield held in place with screwdriver adjusted pipe clamp.
- 2. Provide continuous bead of sealant at top edge for the watertight condition.
- D. Conductor Heads: Configuration as shown; with overflow where required.

- E. Downspouts: Configuration as noted on drawings; provide braces at 2'-0" from each end; elbox 90 degrees at the bottom; hidden fastener straps. Provide covers at the bottom where these tie to civil drainage systems.
- F. Underlayment/Peel N Stick: Tamko TW Metal and Tile underlayment or approved equal to provide a flexible, self- adhering sheet membrane with fastener sealability [min. ASTM D 1970], designed for high temperature and for a min. 45-day exposure. Install in longest rolls/ fewest seams as possible. Coordinate compatibility with adjacent materials/ systems.

# 2.04 FABRICATION

- A. Workmanship: Conform to specifications and recommended practices of the Sheet Metal and Air-Conditioning National Association Architectural Manual, latest edition, for forming, soldering, anchoring, cleaning and provisions for thermal expansion and contraction.
- B. When work is required to be executed in conjunction with non-metallic type roofing and flashing products, coordinate sheet metal work in conjunction therewith and execute in such a manner as to permit required roofing bonds to be obtained.
- C. Provide all accessories or other items essential to the completeness of sheet metal installation, even though not specifically shown or specified. All such items, unless otherwise shown or specified shall be of the same kind of material as an item to which applied. Nails, screws and bolts shall be of types best suited for the purpose intended and of a composition that is compatible with metal to which it will contact.
- D. Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
- E. Form sections in maximum practical lengths. Make allowances for expansion at joints.
- F. Sheet metal work shall be formed, fabricated and installed to adequately provide for expansion and contraction in the completed work, and shall finish water and weather tight throughout. Lock seam work shall be made flat and true to line and sweated full of solder. Flat lock seams, and lap seams where soldered shall be at least 1/2" wide. Lap seams, not soldered, shall lap according to pitch but in no case less than 3". Seams shall be made in direction of flow.
- G. Wipe, wash and clean soldered joints to remove traces of flux immediately after soldering.
- H. Sheet metal work exposed to the weather shall be permanently watertight and weathertight, with suitable provision made for free expansion and contraction without causing leaks.
- I. Separate dissimilar metals from each other by painting each metal surface in the area of contact with a heavy application of the bituminous coating, or by other permanent separation as recommended by the manufacturers of the dissimilar metals.
- J. Any defective work shall be removed and replaced by the Contractor.

# 2.05 SOFFIT PANELS

- A. Prefinished factory formed metal panels- Basis- of- Design: MBCI FW 120; Morin A-12
  - Flush Panel.
  - 2. Material: .032" (.8 mm) aluminum, alloy 3105-H14.
  - 3. Panel Dimension: 12" wide with 1" (25 mm) seam height. Panels to be single panel full width.
  - 4. Texture: Smooth texture.
  - 5. Exterior Finish: fluoropolymer.

# 2.06 \*AD2 CONCEALED-FASTENER, LAP-SEAM METAL WALL PANELS- MECHANICAL SCREEN

- A. General: Provide factory-formed metal panels designed to be field assembled by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.
- B. Flush-Profile, Concealed-Fastener Metal Wall Panels- 'Mechanical Screen': Formed with vertical panel edges and intermediate stiffening ribs symmetrically spaced between panel edges; with flush joint between panels; field assembled with nested lapped edges, and attached to supports using concealed fasteners.
  - A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - 1. ATAS International, Inc.
    - 2. Fabral.
    - 3. MBCI; a division of NCI Group, Inc.
    - 4. Morin A Kingspan Group Company.
    - 5. Petersen Aluminum Corporation.
    - 6. VICWEST.
  - B. MBCI 'FW-120-1 [Basis of Design]; 12" wide; smooth finish, Signature 300 coating system on both front and back of panel [at back on exposed locations]. Provide jamb/ end, sill and head trim; color to match panels. Fasten per manufacturer recommendations.
  - C. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural quality. Pre-painted by the coil-coating process to comply with ASTM A 755/A 755M.
    - 1. Nominal Thickness: 20 gage.
    - 2. Exterior Finish: Two-coat fluoropolymer.
    - 3. Color: As selected by Architect from manufacturer's full range.

### PART 3 - EXECUTION

# 3.01 PREPARATION

- A. Verify dimensions and take measurements necessary at the site before fabrication of items to ensure proper fit. Carefully examine areas to receive sheet metal and report defects and deficiencies. Do not start installation until conditions are corrected.
- B. Furnish to appropriate trades flashing and other sheet metal items requiring installation by others, and coordinate with other trades when joining with their work.

### 3.02 INSTALLATION

- A. Install flashing and sheet metal as indicated and in accordance with SMACNA Manual.
- B. Unless otherwise indicated, provide soldered flat-lock seams, with metal folded back to form hem on concealed side of exposed metal.
- C. Provide for thermal expansion and contraction in sheet metal items exceeding 15'-0" in running length. Place expansion joints at 10'-0" o.c. maximum and 2'-0" from corners and intersections.
- D. Secure flashings in place using specified type fasteners. Use exposed fasteners only in locations approved by Architect. When using exposed fasteners, they are to be of same finish as flashings.
- E. Lock seams and end joints. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate.

- F. All flashings having the top edge exposed shall be counter flashed with metal in strips not over 10 feet in length, shaped to lie flat against the flashing and overlapping the same not less than 4". Exposed edges shall be doubled under hemmed 1/2" to straight lines. End joints shall lap 3", and at corners the metal shall be bent around the angle or locked and soldered.
- G. Joints shall be blind soldered where possible and all excess removed.
- H. Surfaces to be covered with sheet metal shall be smooth and free from defects of every description. All such surfaces shall be cleaned of dirt, rubbish and other foreign materials before the sheet metal work is started. All projecting nails shall be driven flush with the roof boarding.
- I. Formed coping splice pieces shall be installed with double sealant tape parallel to and at either side of the joint.

END OF SECTION

#### PART 1 - GENERAL

#### 1.01 SUMMARY

### A. Section Includes:

- 1. \*AD2 Smoke detector-activated, fabric fire barrier enclosure system at the windows in Record/Bond Office Station, Room 1308.
- 2. Self-closing without auxiliary power.
- Rectangular or polygon shaped enclosure system for horizontal penetrations or complex shaped vertical enclosures.
- 4. Closed fabric bellows enclosure deployed from ceiling.
- 5. Open fabric bellows enclosure connected to walls.

# B. Related Requirements:

- 1. 08 31 00-Access Panels.
- 2. 09 22 00– Load Bearing Header Framing
- 3. 09 91 00-Paint: Field painting of specified components.
- 4. 28 30 00–Detection and Alarm: Provision of smoke detectors.
- 5. Division 26 Sections for 240V and control circuit power including conduit, boxes, conductors, wiring devices, and emergency power.

#### 1.02 REFERENCES

### A. NFPA Codes and Standards:

- 1. 70 National Electrical Code.
- 2. 72 National Fire Alarm Code-2002 and 2007.

#### B. UL Standards:

- 1. 268 Smoke Detectors for Fire Protective Signaling Systems.
- 2. 864 Control Units for Fire Protective Signaling Systems.

### 1.03 SUBMITTALS

- A. Comply with Section 01 33 00–Submittal Procedures:
  - 1. Product Data.
  - 2. Shop Drawings:
    - a. Include configuration layout and dimensions.
    - b. Show and identify related work performed under other sections of the specifications.
  - 3. Quality Assurance/Control Submittals:
    - a. Certifications.
    - b. Manufacturer's installation instructions and testing procedures.

### 1.04 CLOSEOUT SUBMITTALS

- A. Comply with Section 01 77 00–Project Closeout:
  - 1. Operation and Maintenance Manual.
  - 2. Manufacturer's Warranty

### 1.05 QUALITY ASSURANCE

### A. Certifications:

 UL864 / UL10 B / UL 10 D / UL10C / NFPA 252 / UL1784 /ASTM E 84 / OSHPD CA Certificate / CAL FIRE Listing

# B. Pre-Installation Meeting:

- 1. Schedule and convene a pre-installation meeting prior to commencement of field operations with representatives of the following in attendance: Owner, Architect, General Contractor, fire barrier system sub-contractor, and electrical sub-contractor.
- 2. Review substrate conditions, requirements of related work, installation instructions, storage and handling procedures, and protection measures.
- 3. Document responsibilities of various parties and deviations from specifications and installation instructions.

# 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section 01 66 00–Delivery, Storage, and Handling.
- B. Comply with manufacturer's instructions.

### 1.07 WARRANTY

- A. Provide manufacturer's standard one year warranty.
- B. Maintenance and Testing:
  - 1. Perform minimum semi-annual maintenance and testing on each smoke containment system as required by the manufacturer's warranty, code agency evaluation reports, and as required by local authority having jurisdiction.
  - 2. Backup Battery: Tested per the Operation and Maintenance Manual.
  - 3. Provide test documentation.

### PART 2 - PRODUCTS

#### 2.01 MANUFACTURED UNITS

- A. Stoebich Fire & Smoke Curtain P. [Basis of Design]
- B. Manufacturers, subject to the requirements stated herein:
  - 1. Stoebich Fire Protection
  - 2. SmokeGuard www.smokeguard.com
- C. Label each fire barrier system with following information:
  - 1. Manufacturer's name.
  - 2. Label of quality control agency.

#### 2.02 PERFORMANCE / DESIGN CRITERIA

- A. Test Operation and Fire Operation: By gravity, controlled by building fire alarm system signal and test switch.
  - 1. Raise Curtain after Test and After Fire Alarm: Power operated motor in roller.
  - Reset After Test and After Fire Alarm: Automatic. No service call needed. No replacement parts needed.
- B. Maximum Opening Sizes (feet):
  - 1. 52.5 side length x up to 19.9 drop x up to 300 feet perimeter.
  - 2. Perimeter more than 164 feet, maximum drop of 11.5 feet.
  - 3. Perimeter less than 164 feet, maximum drop of 19.9 feet.

4. Minimum leg length for open system is 5 feet.

### 2.03 COMPONENTS

- A. \*AD 2 Curtain Fabric: Glass filament fabrics of glass fiber material coated on one side with a polyester polyurethane latex, with steel wire. Rectangular or polygon shaped base area of the closure. Creates corners without additional columns. Subject to the requirements stated provide:
  - 1. Ecotex 1100
  - 2. McKeon D400.
  - 3. Ratings: E90, UL 10B tested 90 minute fire rating and UL 1784 smoke rating.
- B. Side Guide Assembly:
  - 1. Manufacturer's standard.
  - 2. Use special wall guide for open systems.
- C. Casing/Bearing Type: Standard bearing.
- D. Safety Unit: Manufacturer's standard attached to housing.
- E. Bottom Bar:
  - 1. Warp free, self- leveling type sealed flush to ceiling.
- F. Closing System:
  - 1. Gravigen, fail safe operation.
  - 2. Provide a minimum of 2 drive units and one additional drive unit for each 32.8 feet of perimeter above 65.6 feet in length.
  - 3. 208-240V AC.
- G. Control System:
  - 1. UL 864.
  - 2. RZ7 with battery backup. Hold open time 45 minutes ( RZ7 ).
- H. Finishes:
  - 1. Galvanized, field finished as noted.

## 2.04 FABRICATION

- A. Installation Configuration:
  - 1. Casings attached directly to ceiling above opening or layout.
  - 2. Provide wall guides for open type layout.
- B. Fabricate and install mounting brackets, hardware, and fasteners needed to attach curtain assembly to building structure.

# PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Examine substrates upon which work will be installed.
  - 1. Verify related work performed under other sections is complete and in accordance with Shop Drawings.
  - 2. Verify wall surfaces are acceptable for installation of smoke containment system components.
- B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

- C. Coordinate electrical interface and connection with Division 26.
- D. Coordinate interface and connection with fire alarm system.
- E. Commencement of work by installer is acceptance of substrate.

### 3.02 INSTALLATION

A. Install fire barrier system components in accordance with manufacturer's installation instructions.

# 3.03 FIELD QUALITY CONTROL

- A. Field Test: Follow manufacturer's cycle test procedures.
  - 1. Notify Owner's Representative, local Fire Marshal and alarm sub-contractor minimum one week in advance of scheduled testing.
  - 2. Complete maintenance service record.

# 3.04 DEMONSTRATION

- A. Demonstrate required testing and maintenance procedures to Owner's Representative.
- B. Screen Replacement Notice: Inform Owner's Representative that smoke containment screen requires replacement following exposure to temperatures exceeding 200 degrees F.

END OF SECTION

### SECTION 087100 - DOOR HARDWARE

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
  - 1. Swinging doors.
- B. Door hardware includes, but is not necessarily limited to, the following:
  - 1. Mechanical door hardware.
  - 2. Electromechanical door hardware.
- C. Related Sections:
  - 1. Division 08 Section "Hollow Metal Doors and Frames".
  - 2. Division 28 Section "Access Control Hardware Devices".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
  - 1. ANSI A117.1 Accessible and Usable Buildings and Facilities.
  - 2. ICC/IBC International Building Code.
  - 3. NFPA 70 National Electrical Code.
  - 4. NFPA 80 Fire Doors and Windows.
  - 5. NFPA 101 Life Safety Code.
  - 6. NFPA 105 Installation of Smoke Door Assemblies.
  - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
  - 1. ANSI/BHMA Certified Product Standards A156 Series.
  - 2. UL10C Positive Pressure Fire Tests of Door Assemblies.
  - 3. ANSI/UL 294 Access Control System Units.
  - 4. UL 305 Panic Hardware.
  - 5. ANSI/UL 437- Key Locks.

# 1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
  - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
  - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
  - 3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    - e. Explanation of abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for door hardware.
    - g. Door and frame sizes and materials.
    - h. Warranty information for each product.
  - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
  - 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
    - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
    - b. Complete (risers, point-to-point) access control system block wiring diagrams.
    - c. Wiring instructions for each electronic component scheduled herein.

- 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

# E. Informational Submittals:

- 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

# 1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).
- C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
  - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
  - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
  - 1. Function of building, purpose of each area and degree of security required.
  - 2. Plans for existing and future key system expansion.
  - 3. Requirements for key control storage and software.
  - 4. Installation of permanent keys, cylinder cores and software.
  - 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
  - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
  - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
  - 3. Review sequence of operation narratives for each unique access controlled opening.
  - 4. Review and finalize construction schedule and verify availability of materials.
  - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

# 1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check

Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

### 1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
  - 1. Structural failures including excessive deflection, cracking, or breakage.
  - 2. Faulty operation of the hardware.
  - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
  - 1. Ten years for mortise locks and latches.
  - 2. Five years for exit hardware.
  - 3. Twenty five years for manual overhead door closer bodies.
  - 4. Two years for electromechanical door hardware.

# 1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

# PART 2 - PRODUCTS

### 2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
  - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

# 2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
  - 1. Quantity: Provide the following hinge quantity:
    - a. Two Hinges: For doors with heights up to 60 inches.
    - b. Three Hinges: For doors with heights 61 to 90 inches.
    - c. Four Hinges: For doors with heights 91 to 120 inches.
    - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
  - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
    - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
    - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
  - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
    - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
    - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
  - 4. Hinge Options: Comply with the following:
    - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all outswinging lockable doors.
  - 5. Manufacturers:
    - a. Bommer Industries (BO).
    - b. Hager Companies (HA).
    - c. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge, with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cutouts.
  - 1. Manufacturers:
    - a. Bommer Industries (BO).
    - b. Hager Companies (HA).
    - c. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

#### 2.3 POWER TRANSFER DEVICES

- A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with Molex<sup>TM</sup> standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
  - 1. Manufacturers:
    - a. Hager Companies (HA) ETW-QC (# wires) Option.
    - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) QC (# wires) Option.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to throughdoor wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
  - 1. Provide one each of the following tools as part of the base bid contract:
    - a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) Electrical Connecting Kit: QC-R001.
    - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) Connector Hand Tool: QC-R003.
  - 2. Manufacturers:
    - a. Hager Companies (HA) Quick Connect.
    - McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) QC-C Series.

# 2.4 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
  - 1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
  - 2. Furnish dust proof strikes for bottom bolts.
  - 3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
  - 4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
  - 5. Manufacturers:
    - a. Burns Manufacturing (BU).
    - b. Door Controls International (DC).
    - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- B. Coordinators: ANSI/BHMA A156.3 certified door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.
  - 1. Manufacturers:
    - a. Burns Manufacturing (BU).
    - b. Door Controls International (DC).
    - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- C. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
  - 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
  - 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
  - 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
  - 4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
  - 5. Manufacturers:
    - a. Burns Manufacturing (BU).
    - b. Hiawatha, Inc. (HI).
    - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

# 2.5 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
  - 1. Manufacturers:
    - a. dormakaba Best (BE).
- C. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
  - 1. Threaded mortise cylinders with rings and cams to suit hardware application.
  - 2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
  - 3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
  - 4. Tubular deadlocks and other auxiliary locks.
  - 5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
  - 6. Keyway: Match Facility Standard.
- D. Interchangeable Cores: Provide small format interchangeable cores as specified, core insert, removable by use of a special key; usable with other manufacturers' cylinders.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
  - 1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
  - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
  - 3. Existing System: Field verify and key cylinders to match Owner's existing system.
- F. Key Quantity: Provide the following minimum number of keys:
  - 1. Change Keys per Cylinder: Three (3).
  - 2. Master Keys (per Master Key Level/Group): Five (5).
  - 3. Construction Keys (where required): Ten (10).
  - 4. Construction Control Keys (where required): Two (2).
  - 5. Permanent Control Keys (where required): Two (2).
- G. Construction Keying: Provide temporary keyed construction cores.
- H. Key Registration List (Bitting List):
  - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
  - 2. Provide transcript list in writing or electronic file as directed by the Owner.

# 2.6 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent

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markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

#### 1. Manufacturers:

- a. Lund Equipment (LU).
- b. MMF Industries (MM).
- c. Telkee (TK).

# 2.7 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
  - 1. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.13 requirements to 10 million cycles or greater.

### 2. Manufacturers:

- a. Sargent Manufacturing (SA) 8200 Series.
- b. Match Facility Standard.

# 2.8 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
  - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
  - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
  - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
  - 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

# B. Standards: Comply with the following:

- 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
- 2. Strikes for Bored Locks and Latches: BHMA A156.2.
- 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
- 4. Dustproof Strikes: BHMA A156.16.

# 2.9 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

- 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
- 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
- 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
- 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
- 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
  - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
  - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
- 6. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
- 7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
- 8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
- 9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
- 10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
  - 1. Manufacturers:
    - a. Sargent Manufacturing (SA) 80 Series.
    - b. Match Facility Standard.

### 2.10 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
  - 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
  - 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
  - 3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
  - 4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
  - 5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
  - 6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Large Body Cast Iron): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control.
  - 1. Manufacturers:
    - a. Sargent Manufacturing (SA) 281 Series.
    - b. Match Facility Standard.

### 2.11 SURFACE MOUNTED CLOSER HOLDERS

- A. Electromagnetic Door Holders: Certified ANSI A156.15 electromagnetic door holder/releases with a minimum 20 to 40 pounds holding power and single coil construction able to accommodate.12VDC, 24VAC, 24VDC and 120VAC. Coils to be independently wound, employing an integral fuse and armatures to include a positive release button.
  - 1. Manufacturers:
    - a. Rixson (RF) 980/990 Series.
    - b. Sargent Manufacturing (SA) 1560 Series.

### 2.12 ARCHITECTURAL TRIM

### A. Door Protective Trim

- 1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
- 2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
- 3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
- 4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
  - a. Stainless Steel: 300 grade, 050-inch thick.
- 5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
- 6. Manufacturers:
  - a. Burns Manufacturing (BU).
  - b. Hiawatha, Inc. (HI).
  - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

### 2.13 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
  - 1. Manufacturers:
    - a. Burns Manufacturing (BU).
    - b. Hiawatha, Inc. (HI).
    - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and

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shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.

### 1. Manufacturers:

- a. Rixson Door Controls (RF).
- b. Sargent Manufacturing (SA).

### 2.14 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
  - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
  - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

### F. Manufacturers:

- 1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
- 2. Reese Enterprises, Inc. (RE).

### 2.15 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
  - 1. Manufacturers:

- a. Security Door Controls (SD) DPS Series.
- b. Securitron (SU) DPS Series.
- B. Switching Power Supplies: Provide power supplies with either single or dual voltage configurations at 12 or 24VDC. Power supplies shall have battery backup function with an integrated battery charging circuit and shall provide capability for power distribution, direct lock control and Fire Alarm Interface (FAI) through add on modules. Power supplies shall be expandable up to 16 individually protected outputs. Output modules shall provide individually protected, continuous outputs and/or individually protected, relay controlled outputs.

### 1. Manufacturers:

- a. Securitron (SU) AQD Series.
- C. Energy Efficient Switching Power Supplies: Provide UL listed or recognized filtered and regulated power supplies. Provide single voltage units as shown in the hardware sets. Units must have one access control input and one fire alarm input. Standby power consumption of unit must be less than 10mW at 120VAC. Provide integral battery backup as standard for all units. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

### 1. Manufacturers:

a. Securitron (SU) - EPS Series.

### 2.16 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

### 2.17 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

### PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

### 3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

### 3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
  - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
  - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
  - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
  - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

### 3.4 FIELD QUALITY CONTROL

- A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures" and "Cash Allowances". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
  - 1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.
  - 2. Submit documentation of incomplete items in the following formats:
    - a. PDF electronic file.
    - b. Electronic formatted file integrated with the Openings Studio  $^{\text{TM}}$  door opening management software platform.

### 3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

### 3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

### 3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

### 3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
  - 1. Quantities listed are for each pair of doors, or for each single door.
  - 2. The supplier is responsible for handing and sizing all products.
  - 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
  - 4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.
- B. Manufacturer's Abbreviations:
  - 1. MK McKinney
  - 2. PE Pemko
  - 3. RO Rockwood
  - 4. SA SARGENT
  - 5. BE dormakaba Best
  - 6. RF Rixson
  - 7. OT Other
  - 8. SU Securitron

# **Hardware Sets**

### **Set: 1.0**

Doors: 1025, 1026, 1027, 1029, CH04A, CH04B, CH05, CH08, CH09

Description: Ext - Sgl - Storeroom - Closer/stop

1	Continuous Hinge	CFM_HD1		PE
1	Storeroom/Closet Lock	70 8204 LNP	US26D	SA
1	Cylinder/core	As required	626	BE
1	Surface Closer	281 CPS	EN	SA
1	Threshold	253x3AFG		PE
1	Rain Guard	346C		PE
1	Sweep	315CN		PE

### Notes:

Hollow metal frame manufacturer to provide weather stripping in the Thermal Break frame.

### **Set: 2.0**

Doors: 2023

Description: Pair - Storeroom - AFB - Closer/stop

8	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Automatic Flush Bolt	2842/2942	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Storeroom/Closet Lock	70 8204 LNP	US26D	SA
1	Cylinder/core	As required	626	BE
1	Coordinator	2672	US28	RO
2	Mounting Bracket	2601AB or 2601C	US28	RO
2	Surface Closer	281 PS	EN	SA
1	Gasketing Pair	S88BL		PE
1	Astragal	3572SP		PE

# **Set: 3.0**

Doors: 2013

Description: Pair - Storeroom - MFB - OH Stop - DC

8 Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
2 Flush Bolt	557	US26D	RO
1 Dust Proof Strike	570	US26D	RO
1 Storeroom/Closet Lock	70 8204 LNP	US26D	SA
1 Cylinder/core	As required	626	BE
2 Surf Overhead Stop	10-X36	630	RF
2 Silencer - Metal Frame	608		RO
2 Position Switch	DPS-M-BK		SU

# **Set: 4.0**

Doors: 1406A, 2024, ST07A, ST07B

Description: Dbl Egress Pair - CVR/EO - Closer - MHO

2	Continuous Hinge	CFM_HD1		PE
2	CVR Exit, Exit Only	12 MD8610 EO	US32D	SA
2	Surface Closer	281 O/P9	EN	SA
2	Electromagnetic Holder	998M x Voltage	689	RF
1	Gasketing Pair	S88BL		PE
1	Astragal	357SP		PE

<u>Set: 5.0</u> Doors: 1404A

Description: Sgl - Rim/FSE Trim - RX - Card Reader - Closer/stop - DC

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Hinge (heavy weight)	T4A3786 QCxx 4-1/2" x 4-1/2"	US26D	MK
1 Rim Exit, FSE	53 55 70 8876 - ETP	US32D	SA
1 Cylinder/core	As required	626	BE
1 Surface Closer	281 PS	EN	SA
1 W/F Stop	406 / 441CU	US26D	RO
3 Silencer - Metal Frame	608		RO
1 ElectroLynx Harness	QC-Cxxx sized for door width		MK
1 ElectroLynx Harness	QC-C1500P		MK

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1	Position Switch	DPS-M-BK	SU
1	Power Supply	EPS-05	SU

### Notes:

Coordinate voltage, operation and electrical characteristics with all related trades.

Card Reader, wiring and connections by security provider.

# **Set: 5.1**\*AD 2

Doors: 1404B

Description: Sgl - Rim/FSE Trim - RX - Card Reader - Closer/stop - DC

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Hinge, Full Mortise	TA2714 QCxx 4-1/2" x 4-1/2"	US26D	MK
1	Rim Exit, FSE	53 55 70 8876 - ETP	US32D	SA
1	Cylinder/core	As required	626	BE
1	Surface Closer	281 PS	EN	SA
1	W/F Stop	406 / 441CU	US26D	RO
3	Silencer - Metal Frame	608		RO
1	ElectroLynx Harness	QC-Cxxx sized for door width		MK
1	ElectroLynx Harness	QC-C1500P		MK
1	Position Switch	DPS-M-BK		SU
1	Power Supply	EPS-05		SU

### Notes:

Coordinate voltage, operation and electrical characteristics with all related trades.

Card Reader, wiring and connections by security provider.

# Set: 6.0

Doors: 1311, 2104A, 2204A, 2304A

Description: Sgl - 2C Lock - 2 Card Reader - Closer - DC

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Hinge, Full Mortise	TA2714 QCxx 4-1/2" x 4-1/2"	US26D	MK
1	Fail Safe Lock	70 8272- LNP	US26D	SA
2	Cylinder/core	As required	626	BE
1	Surface Closer	281 O/P9	EN	SA
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	W/F Stop	406 / 441CU	US26D	RO
1	Gasketing Pair	S88BL		PE
2	Card Reader	By security provider		OT
1	Position Switch	DPS-M-BK		SU
1	Power Supply	EPS-05		SU

### Notes:

Coordinate voltage, operation and electrical characteristics with all related trades.

Card Reader, wiring and connections by security provider.

# **Set: 7.0**

Doors: 1406B, 2006, 2103A, 2203A, 2303A

Description: Sgl - 2C Lock - 2 Card Reader - Closer - Remote Release - DC

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Hinge, Full Mortise	TA2714 QCxx 4-1/2" x 4-1/2"	US26D	MK
1	Fail Safe Lock	70 8272- LNP	US26D	SA
2	Cylinder/core	As required	626	BE
1	Surface Closer	281 O/P9	EN	SA
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	W/F Stop	406 / 441CU	US26D	RO
1	Gasketing Pair	S88BL		PE
1	ElectroLynx Harness	QC-Cxxx sized for door width		MK
1	ElectroLynx Harness	QC-C1500P		MK
2	Card Reader	By security provider		OT
1	Position Switch	DPS-M-BK		SU
1	Power Supply	EPS-05		SU

### Notes:

Coordinate voltage, operation and electrical characteristics with all related trades.

Card Reader, wiring and connections by security provider.

Remote release.

# Set: 8.0

Doors: 1205, 1213, 2015

Description: Sgl - FSE Lock - RX - Card Reader - Closer - DC

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
	Hinge, Full Mortise	TA2714 QCxx 4-1/2" x 4-1/2"	US26D	MK
1	Fail Secure Lock	RX 70 8271- LNP	US26D	SA
1	Cylinder/core	As required	626	BE
1	Surface Closer	281 O/P9	EN	SA
1	W/F Stop	406 / 441CU	US26D	RO
3	Silencer - Metal Frame	608		RO
1	ElectroLynx Harness	QC-Cxxx sized for door width		MK
1	ElectroLynx Harness	QC-C1500P		MK
1	Position Switch	DPS-M-BK		SU
1	Power Supply	EPS-05		SU

### Notes:

Coordinate voltage, operation and electrical characteristics with all related trades.

Card Reader, wiring and connections by security provider.

# Set: 9.0

Doors: 2098

Description: Sgl - FSE Lock - RX - Card Reader - Closer/stop - DC

3 Hinge, Full Mortise TA2714 4-1/2" x 4-1/2" US26D MK

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Hinge, Full Mortise	TA2714 QCxx 4-1/2" x 4-1/2"	US26D	MK
Fail Secure Lock	RX 70 8271- LNP	US26D	SA
Cylinder/core	As required	626	BE
Surface Closer	281 PS	EN	SA
Silencer - Metal Frame	608		RO
ElectroLynx Harness	QC-Cxxx sized for door width		MK
ElectroLynx Harness	QC-C1500P		MK
Position Switch	DPS-M-BK		SU
Power Supply	EPS-05		SU
	Hinge, Full Mortise Fail Secure Lock Cylinder/core Surface Closer Silencer - Metal Frame ElectroLynx Harness ElectroLynx Harness Position Switch Power Supply	Fail Secure Lock Cylinder/core Surface Closer Silencer - Metal Frame ElectroLynx Harness Position Switch  RX 70 8271- LNP As required Cylinder/core As required Cylinder/core As required Cylinder/Cylinder Cylinder Cylind	Fail Secure Lock Cylinder/core As required 626 Surface Closer Silencer - Metal Frame ElectroLynx Harness QC-Cxxx sized for door width ElectroLynx Harness QC-C1500P Position Switch US26D C26 EN C27 C28

### Notes:

Coordinate voltage, operation and electrical characteristics with all related trades.

Card Reader, wiring and connections by security provider.

# **Set: 10.0**

Doors: 1308

Description: Sgl - FSE Lock - RX - Card Reader - Closer - OH Stop - DC

Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
Hinge, Full Mortise	TA2714 QCxx 4-1/2" x 4-1/2"	US26D	MK
Fail Secure Lock	RX 70 8271- LNP	US26D	SA
Cylinder/core	As required	626	BE
Surf Overhead Stop	10-X36	630	RF
Surface Closer	281 O/P9	EN	SA
Kick Plate	K1050 10" 4BE CSK	US32D	RO
Silencer - Metal Frame	608		RO
ElectroLynx Harness	QC-Cxxx sized for door width		MK
ElectroLynx Harness	QC-C1500P		MK
Position Switch	DPS-M-BK		SU
Power Supply	EPS-05		SU
	Hinge, Full Mortise Hinge, Full Mortise Fail Secure Lock Cylinder/core Surf Overhead Stop Surface Closer Kick Plate Silencer - Metal Frame ElectroLynx Harness ElectroLynx Harness Position Switch Power Supply	Hinge, Full Mortise  Fail Secure Lock  RX 70 8271- LNP  Cylinder/core  Surf Overhead Stop  10-X36  Surface Closer  Kick Plate  Silencer - Metal Frame  ElectroLynx Harness  QC-Cxxx sized for door width  ElectroLynx Harness  Position Switch  TA2714 QCxx 4-1/2" x 4-1/2"  RX 70 8271- LNP  As required  10-X36  281 O/P9  Kithology  Ki	Hinge, Full Mortise  Fail Secure Lock  RX 70 8271- LNP  US26D  Cylinder/core  As required  626  Surf Overhead Stop  10-X36  Surface Closer  Kick Plate  K1050 10" 4BE CSK  US32D  Silencer - Metal Frame  ElectroLynx Harness  QC-Cxxx sized for door width  ElectroLynx Harness  QC-C1500P  Position Switch  US26D  US26D  US26D  EX  US26D  EX  EX  EX  EX  EX  EX  EX  EX  EX  E

# Notes:

Coordinate voltage, operation and electrical characteristics with all related trades.

Card Reader, wiring and connections by security provider.

# **Set: 11.0**

Doors: ST04B

Description: Sgl - Rim/Passage - Closer - KP

4 I	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 I	Rim Exit (passage)	12 8815 ETL	US32D	SA
1 5	Surface Closer	281 O/P9	EN	SA
1 I	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1 V	W/F Stop	406 / 441CU	US26D	RO
1 (	Gasketing Sgl	S88BL		PE

# **Set: 12.0**

Doors: 1015, 1109, 1116, 1206, 1307 Description: Sgl - Storeroom - Closer

<ul> <li>4 Hinge, Full Mortise</li> <li>1 Storeroom/Closet Lock</li> <li>1 Cylinder/core</li> <li>1 Surface Closer</li> <li>1 W/F Stop</li> <li>3 Silencer - Metal Frame</li> </ul>	TA2714 4-1/2" x 4-1/2" 70 8204 LNP As required 281 O/P9 406 / 441CU 608	US26D US26D 626 EN US26D	MK SA BE SA RO RO
Set: 13.0 Doors: 2219, 2309, 2318, 2319, 3211, 3307 Description: Sgl - Storeroom - Closer - DC	, 3308		
<ul> <li>4 Hinge, Full Mortise</li> <li>1 Storeroom/Closet Lock</li> <li>1 Cylinder/core</li> <li>1 Surface Closer</li> <li>1 W/F Stop</li> <li>3 Silencer - Metal Frame</li> <li>1 Position Switch</li> </ul>	TA2714 4-1/2" x 4-1/2" 70 8204 LNP As required 281 O/P9 406 / 441CU 608 DPS-M-BK	US26D US26D 626 EN US26D	MK SA BE SA RO RO SU
<u>Set: 14.0</u> Doors: 1016, 1134, 1201, 1318, 1332, 2124 Description: Sgl - Storeroom - Closer/stop			
<ul> <li>4 Hinge, Full Mortise</li> <li>1 Storeroom/Closet Lock</li> <li>1 Cylinder/core</li> <li>1 Surface Closer</li> <li>3 Silencer - Metal Frame</li> </ul>	TA2714 4-1/2" x 4-1/2" 70 8204 LNP As required 281 PS 608	US26D US26D 626 EN	MK SA BE SA RO
<u>Set: 15.0</u> Doors: 2106, 2110, 2112, 2206, 2306, 3101 Description: Sgl - Storeroom - Closer/stop -			
<ul> <li>4 Hinge, Full Mortise</li> <li>1 Storeroom/Closet Lock</li> <li>1 Cylinder/core</li> <li>1 Surface Closer</li> <li>3 Silencer - Metal Frame</li> <li>1 Position Switch</li> </ul>	TA2714 4-1/2" x 4-1/2" 70 8204 LNP As required 281 PS 608 DPS-M-BK	US26D US26D 626 EN	MK SA BE SA RO SU
Set: 16.0 Doors: 1028, 2002 Description: Sgl - Storeroom - Closer/stop -	DC		
<ul> <li>4 Hinge (heavy weight)</li> <li>1 Storeroom/Closet Lock</li> <li>1 Cylinder/core</li> <li>1 Surface Closer</li> <li>3 Silencer - Metal Frame</li> <li>1 Position Switch</li> </ul>	T4A3786 4-1/2" x 4-1/2" 70 8204 LNP As required 281 PS 608 DPS-M-BK	US26D US26D 626 EN	MK SA BE SA RO SU

Set:	17.	0.

Doors: 1108, 1110, 1111, 1135, 1309

Description: Sgl - Office

4 Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Office/Entry Lock	70 8205 LNP	US26D	SA
1 Cylinder/core	As required	626	BE
1 W/F Stop	406 / 441CU	US26D	RO
1 Silencer - Metal Frame	608		RO

# Set: 18.0

Doors: 1207

Description: Sgl - Classroom - Closer

4	Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Classroom Lock	70 8237 LNP	US26D	SA
1	Cylinder/core	As required	626	BE
1	Surface Closer	281 O/P9	EN	SA
1	W/F Stop	406 / 441CU	US26D	RO
3	Silencer - Metal Frame	608		RO

# Set: 19.0

Doors: 1113

Description: Sgl - Passage - Closer - OH stop

4	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	Surf Overhead Stop	10-X36	630	RF
1	Surface Closer	281 O/P9	EN	SA
3	Silencer - Metal Frame	608		RO

# **Set: 20.0**

Doors: 1131, 1132, 1133, 1136, 1140

Description: Sgl - Passage

4	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	W/F Stop	406 / 441CU	US26D	RO
1	Gasketing Sgl	S88BL		PE

# Set: 21.0

Doors: 1139, 1402, 1403, 2019, 2020, 2021, 2025

Description: Sgl - Passage - OH Stop

4	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	Surf Overhead Stop	9-X36	630	RF
1	Gasketing Sgl	S88BL		PE

# **Set: 22.0**

### SECTION 08 71 00 DOOR HARDWARE\*AD 2

Doors: 1012, 1114, 1115, 1209, 1306, 2004, 2105, 2205, 2305

Description: Sgl - Keyed Lock - Closer

4	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Institutional Privacy Lock	70 8257 LNP	US26D	SA
1	Cylinder/core	As required	626	BE
1	Surface Closer	281 O/P9	EN	SA
1	W/F Stop	406 / 441CU	US26D	RO
1	Gasketing Sgl	S88BL		PE

# Set: 23.0

Doors: 1312, 1315

Description: Sgl - Privacy

4	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Privacy Lock	8265 LNP	US26D	SA
1	W/F Stop	406 / 441CU	US26D	RO
1	Gasketing Sgl	S88BL		PE

# **Set: 24.0**

Doors: 1017, 1018, 1019, 1127, 1128, 1137, 1138, 1210A, 1210B, 1210C, 1210D, 1211A, 1211B, 1211C, 1211D, 1304A, 1304B, 1304C, 1304D, 1305A, 1305B, 1305C, 1305D, 1331C, 1331D, 1331E, 1222B, 122BB, 12

1331F, 1333C, 1333D, 1333E, 1333F Description: Sgl - Sp Hinge - Privacy

2 Hinge, Spring	1552 4-1/2" x 4-1/2"	US32D	MK
1 Privacy Lock	8265 LNP	US26D	SA
3 Silencer - Metal Frame	608		RO

# Set: 25.0

Doors: 1331A, 1333A

Description: Sgl - Push/Pull - Closer - KP

4	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Push Plate	70F	US32D	RO
1	Door Pull	108 Mtg-Type 1HD	US32D	RO
1	Surface Closer	281 O/P9	EN	SA
1	Kick Plate	K1050 10" 4BE CSK	US32D	RO
1	W/F Stop	406 / 441CU	US26D	RO
3	Silencer - Metal Frame	608		RO

# **Set: 26.0**

Doors: 1001A, 1001B

Description: All Hardware by Dr provider

1 All Hardware by door manufacturer. 00

# SECTION 08 71 00 DOOR HARDWARE\*AD 2

END OF SECTION 087100

# PART 1 GENERAL

### 1.1 SUMMARY

A. Provide items as outlined below. Scope of Work includes blocking as specified in Section 06 10 00.

### 1.2 QUALITY ASSURANCE

A. Use adequate number of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the requirements and the methods needed for proper installation of the work of this Section.

### 1.3 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the Owner furnished items before, during and after installation.

### 1.4 QUALITY ASSURANCE

A. Meeting ASTM-E84 Class I rating.

### PART 2 PRODUCTS

- 2.1 CG CORNERGUARDS: Full height with closure caps where appropriate, Start at top of base.
  - A. Surface-mounted: Construction Specialties SSM-20N Acrovyn, color as noted on finish schedule.
  - B. Provide 2% maintenance stock for all types of cornerguards utilized on this project.
- 2.2 CRASH RAILS: Model SCR-48N with PVC-free Acrovyn 3000; 6" high with end caps; refer to drawings for double rail installation detail and mounting heights. Coordinate end caps at light switches, thermostats, corner guards, and other mounted equipment, etc.; color as scheduled. [Construction Specialties; www.c-sgroup.com]
- 2.3 BLINDS: Hunter Douglas, Model Modern Precious Metals, aluminum blinds with cordless SimpleLift operating system. Bottom hold down bracket and tilt rod.
- 2.4 KNOX BOX Provide and install a Knox Company, Newport Beach, CA Model 3200 Knox switch or Knox Pad Lock at site entry gates per Fire Marshal direction. Provide 3200 Knox Box recessed into exterior face of building per City direction at the fire riser room. Additionally, provide Knox elevator box at level 1 of each elevator with firefighter control keys and elevator emergency door keys.
- 2.5 ROOF CABLE ENTRY SYSTEM- Tessco Technologies SSM Quickport system; 24 hole Model QWKPPT with 12 holes and a grounding bar on two sides; with 12 port entry feed throughs, and 12 half inch inserts. 28"H x 35"l x 23"w. https://www.tessco.com/products/displayProductInfo.do?sku=48067
- 2.6 SPLASH BLOCKS: Provide precast concrete splash blocks at all overflow and roof drain downspouts and scupper locations that empty onto landscaping [unpaved areas] or roofing. 16" x 36".
- 2.7 EQ 360 "Z" LOCKER: Bradley <a href="www.bradleycorp.com">www.bradleycorp.com</a> Lenoxzlocker Lenox "Z" Locker, solid plastic. Size as indicated in drawing scheduled. Provide padlock hasps, 4" high lenoxbase, number plates, wall hooks, and lenoxfiller filler ends.

- 2.8 EQ-614: EYEWASH AND BODY SHOWER: Bradley [Menomonee Falls, WI 800-272-3539, [www.bradleycorp.com] Model S19-310AC, complies with ANSI/ISEA Standard Z358.1, Galvanized Steel Protected with Safety Yellow Coating, construction with all stainless steel fittings. Drench shower to exceed 20 GPM, Eye/Face wash to exceed 3 GPM.
- \*AD 2 EQ 1217-4 PNEUMATIC TUBE SYSTEM: Eagle Pneumatic, Inc. Model: Mark II. Provide a complete system for a 4" tube system connecting 3 stations. Manufacture from heavy steel for durability. Pressure vacume system includes two systems, 4" powered end stations, two in Property Storage room, Two non-powered in Records/Bond Office room, and Booking room to have one intermediate station. System design to be reviewed by owner and architect. For system information contact: Patrick Evans at 863.644.4870x223 at sales@ <a href="http://eaglepneumatic.com">http://eaglepneumatic.com</a>. Carrier to be compatible with system type. Carrier selection to be made by architect and owner from full product line of PTS system available options. Provide one carrier per tube connection. Provide one carrier as attic stock.
- 2.10 EQ-1231-1016: DEAL TRAY C.R. Laurence Co., Inc. Standard Drop-In Deal Tray, Model # CTD08, 8" wide x 10" deep x 1 3/4" h; flush drop-in design with 16ga stainless steel, #3 satin brushed finish. [www.crlaurence.com] or by Armortex
- 2.11 EQ-1241: DEAL DRAWER C. R. Laurence Standard High Brushed Stainless Steel Deal Drawer, Model #DD1616; 15-3/4" wide x 22-1/4" deep x 4-15/16" h; flush drop-in design. [www.crlaurence.com]
- 2.12 EQ-1262: PASS-THRU HOPPER C. R. Laurence Co., Inc. Brushed Stainless Thru-Wall Pass-Thru Hopper, Model # H0P1611TW; 18" wide x 9" deep x 12" h. [www.crlaurence.com]
- 2.13 EQ-1541, 1542 and 1543 FIRE EXTINGUISHERS AND CABINETS J.L. Industries, Larsen, or Potter Roemer. Extinguisher to be 10 pound ABC, UL-4A-60BC, Larsen MP10; wall bracket B2 at locations noted "1541"; semi recessed cabinet 2409-R4 with recessed handle and die cut lettering at "1542", cabinets to solid doors. At locations noted "1542D" provide semi-recessed detention cabinet, DEC 2409-R4. Mount cabinet so extinguisher is not taller than 48" AFF, with a projecting sign (Larson PTD-182 or equal) above. Provide at locations shown on drawings and min. at all electric rooms and elevator equipment rooms. If not shown on drawings provide min. 1 for each 3000 square feet of gross building space. At Data Room(s) provide a Type FE-36 extinguisher and wall bracket.
- 2.14 EQ-1561: FIRE HOSE CABINET Detention Cabinet shall be Model No.DC-1810 as manufactured by Potter Roemer Fire Pro, City of Industry, CA 800-366-FIRE. Wall mounting to be recessed. Door to be flush solid metal with security lock. Install the cabinet plumb and level where indicated on the drawings, at heights acceptable to the authority having jurisdiction and ADA compliant. Verify class of cabinet and type with Fire Marshal and TCJS.
- 2.15 EQ-2233-A: CONVEYOR 1: PROPERTY STORAGE ROOM White Conveyors, Inc. Model Number: JND-408-U3. Up and Down, double tier conveyor equipped with 3 slot steel frames measuring 12 inches in length. Double aluminum yoke chain assemblies rated at 60 pounds capacity per foot. Equipped with (2) 2HP caterpillar drive units with inverter drive controls pre wired for 208V/3PH/60HZ. Conveyor is equipped with an arm mounted 600 series keyboard and an arm mounted 601 hand switch. Conveyor painted surfaces are gloss black and equipped with 8 tooth sprockets. Conveyor capacity is as follows; JND-408-U3; (408) frames x 3 slot x 2 tiers = 2,448 individual slots. Bags 2,448 inmate property storage bags, Style: Duramesh Ultra featuring full mesh front and back panel with locking D ring zipper. Includes 3"x3" clear vinyl window on both sides of gusset.
- 2.16 EQ-2233-B: CONVEYOR 2: SECURE PROPERTY STORAGE ROOM White Conveyors, Inc. Model Number: NDU-1240-U. Up and Down, double tier conveyor equipped with 10 slot steel frames measuring 12 inches in length. Single aluminum yoke chain assemblies rated at 30 pounds capacity per foot. Equipped with 1HP direct drive unit with inverter drive controls pre wired for 208V/3PH/60HZ. Conveyor is equipped with an arm mounted 600 series keyboard and an arm mounted 601 hand switch. Conveyor painted surfaces are gloss black and equipped with 6 tooth sprockets. Conveyor capacity is as follows; NDU-1240-U; (124) frames x 10 slot x 2 tiers = 2,480 individual slots. Bags 2,448 12" locking canvas zipper bags with D ring.

- 2.17 EQ-2432: WORK TABLE WITH SINK Regency. Model Number 600STCB3096L/R. Durable 16 gauge type 304 stainless steel top, 20 gauge, 304 series stainless steel cross braces, a 12" deep stainless steel sink with a deck mounted faucet, 5" backsplash, stainless steel legs and sockets, adjustable bullet feet.
- 2.18 EQ-3321: RESIDENTIAL WASHER Residential washing machine, General Electric Model Number WCVH6800JWW. [www.geappliances.com]
- 2.19 EQ-3331: RESIDENTIAL DRYER Residential Dryer, General Electric Model Number DCVH680EJWW. [www.geappliances.com]
- 2.20 EQ-3515: SIDE BY SIDE REFRIGERATOR Refrigerator, General Electric Model Number PFS22MIWWW. [www.geappliances.com]
- 2.21 EQ-4221: BASKETBALL BACKBOARD AND RIM: By Draper or Porter; stationary, powder coated steel, fixed height at 12' AFF, fan- shaped backboard 54"W x 35" with pre- drilled holes for flush mount to wall; with complete goal mounting assembly; fixed ring/ rim; cotton net.
- 2.22 EQ-5423: ELECTRONIC KEY CABINET: By Real Time Networks; 2 module cabinet for 40 key capacity with 32 module and 8 module. 16 ga. Powder-coated stainless steel with 0.06" thick housing and 0.10" thick lock door without window. Authentication options for pin code, RFID, proximity card, biometric, IrisID, or smart phone. 110V power with battery backup for 24-48 hours.

### PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install per manufacturer's recommendations.
- B. All applications to be true and plumb.

END OF SECTION

### PART 1 – GENERAL

### 1.01 SECTION INCLUDES

A. Furnish all labor, materials, services and equipment required in conjunction with or properly incidental to the installation of lockers, benches and storage cubicles as described herein.

### 1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data and installation instructions for locker units.
- B. Samples: Submit color samples on squares of same substrate and finish materials to be used for fabrication of lockers.
- C. Shop Drawings: Submit shop drawings for lockers, verifying dimensions affecting locker installations. Show lockers in detail, a method of installation, fillers, trim, base, and accessories. Include locker numbering sequence information.
- D. Warranty: Executed copies of manufacturer's standard warranties.
  - 1. Phenolic lockers: Minimum 10 year material, 2-year workmanship/labor.

### 1.03 JOB CONDITIONS

- A. Do not deliver lockers until the building is enclosed and temperature and humidity controlled.
- B. Protect from damage during delivery, handling, storage, and installation.

### PART 2 - PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

- A. Phenolic/ HPDE
  - 1. Summit
  - 2. Columbia
  - 3. ASI
  - 4. Bradley Lenox
  - 5. Tufftec

### 2.02 MATERIALS AT Z STYLE LOCKERS

- A. Phenolic Composite Components
  - 1. Decorative papers impregnated with melamine resin on faces and integrally compression molded with a core consisting of solid phenolic impregnated kraft papers utilizing a proprietary process.
  - 2. UV-stabilized finish (specification basis is Trespa Meteon material); or lesser quality HDPE.
  - 3. Colors and patterns as selected from manufacturer's full line of colors.
- B. Stainless Steel: ASTM A 167, Type 304 or 316
- C. Locker Body and Doors: Locker side panels of 3/8" thick solid phenolic composite panels with the rough matte finish. All shelves, tops and bottoms made of ½" thick solid phenolic, and have dual ventilation slots. Backs of min. 3/8" thick solid phenolic. Doors shall be min. ½" thick; Z profile. Lockers designed to be water resistant and rustproof inside and out.

- 1. Provide a secure, but well ventilated door face for maximum air flow.
- 2. Venting shall occur at door face only; not between lockers; designed to take advantage of natural air convection. Provide maximum ventilation possible within manufacturer's full line of options.

### 2.03 MATERIALS AT SOLID PHENOLIC/HPDE LOCKERS

- A. Phenolic Composite Components
  - Decorative papers impregnated with melamine resin on faces and integrally compression molded with a core consisting of solid phenolic impregnated kraft papers utilizing a proprietary process; or HPDF
  - 2. UV-stabilized finish (specification basis is Trespa Meteon material).
  - 3. Colors and patterns as selected from manufacturer's full line of colors.
- B. Stainless Steel: ASTM A 167, Type 304 or 316
- C. Locker Body and Doors: Locker side panels of 3/8" [10mm] thick solid composite panels with the rough matte finish. All shelves, tops and bottoms made of ½" thick solid phenolic, and have dual ventilation slots. Backs of min. ¼" thick solid phenolic. Lockers designed to be water resistant and rustproof inside and out. Provide a secure, but well ventilated door face for maximum air flow.
  - 1. Venting shall occur at door face only; not between lockers; designed to take advantage of natural air convection. Provide maximum ventilation possible within manufacturer's full line of options.
- D. Locking System: Hasp prepared for a padlock.
- E. Accessories: top hook and two side wall hooks. Provide end and filler panels [including exposed backs] of ½" solid material with the same construction as the locker body.
- F. Height: 71 3/4"
- G. Locker Identification: Inlaid solid stainless steel disc.
- H. Base: 3/4" solid material, 4" high, U.N.O.

### 2.04 ACCESSIBILITY

- A. At each locker area provide at least one accessible locker and a minimum of 5% of each type utilized.
  - 1. Lockers shall be located where they have a clear floor space in front of the accessible locker(s) at least 30 inches wide by 48" deep.
  - 2. The locker shall be modified to have the bottom of the locker no lower than 9" AFF and with shelves no higher than 48" AFF at shallow lockers and 54" AFF at lockers 12" deep.
  - 3. Provide a tactile accessibility sign.
  - 4. The operation of the door shall be by lever type handle with padlock locking capability.

### 2.05 LOCKERS AND BENCHES

- A. EQ-346-3 DUTY LOCKER: Penco Products, Inc, Metal Three Tier Vanguard Locker, [www.pencoproducts.com]
- B. EQ-360: Lenox "Z" Locker Solid Plastic, LENOXZLOCKER. [Bradley; www.bradleycorp.com]
- C. EQ-394-A: FLOOR MOUNTED ALUMINUM LOCKER BENCH WITH WOOD TOP 5784, 1-piece units of Accoya Radiata Pine, acetylated; Grade A2, minimum 9-1/2 inches wide by 1-1/4 inches thick, with rounded corners and edges. [Lyon; www.lyonworkspace.com]
  - 1. Provide one coat of clear sealer on all surfaces, and one coat of clear lacquer on top and sides.
  - 2. 48" L x 9-1/2" W x 16-5/8" H; or lengths as shown on drawings.
  - 3. Tuffec solid HDPE benchtop material is an accepted substitution.

- B. Fixed Pedestals: Manufacturer's standard supports, with predrilled fastener holes for attaching bench top and anchoring to the floor, complete with fasteners and anchors, and as follows:
  - 1. Cast Iron: 1-1/2-inch-diameter steel tubing threaded on both ends, with standard pipe flange at the top and bell-shaped cast-iron base; with baked-enamel or powder-coat finish; anchored with exposed fasteners.
  - 2. 17" Black anodized aluminum pedestal with welded aluminum flanges.
  - 3. Color: Match lockers when installed in locker rooms.

### PART 3 - EXECUTION

### 3.01 PREPARATION

### A. Field Measurements

- 1. Take field measurements prior to preparation of shop drawings and fabrication of special components, when possible, to ensure proper fitting of work.
- 2. Allow for adjustment and fitting of trim and filler panels wherever taking of field measurements before fabrication might delay work.

### 3.02 INSTALLATION

- A. Install lockers at locations shown in accordance with manufacturer's instructions for plumb, level, rigid, and flush installation.
- B. Space fastenings as recommended by the manufacturer, and apply through back-up reinforcing plates where necessary to avoid distortion; conceal fasteners insofar as possible.
- C. Install trim, base, and filler panels where indicated using concealed fasteners to provide a flush, hairline joints against adjacent surfaces.

### 3.03 ADJUST AND CLEAN

- A. Adjust doors and latches to operate easily without binding.
- B. Verify that integral locking devices are operating properly.
- C. Touch-up marred finishes, replace units which cannot be restored to factory-finished appearance.
- D. Use only materials and procedures recommended or furnished by locker manufacturer.

# END OF SECTION

### PART 1 - GENERAL

### 1.01 SUMMARY

- A. Section includes Hydraulic passenger elevators as shown and specified. Elevator work includes:
  - 1. Standard pre-engineered hydraulic passenger elevators; drilled shaft type
  - 2. Elevator car enclosures, hoistway entrances and signal equipment.
  - 3. Jack(s).
  - 4. Operation and control systems.
  - 5. Accessibility provisions for physically disabled persons.
  - 6. Equipment, machines, controls, systems and devices as required for safely operating the specified elevators at their rated speed and capacity.
  - 7. Materials and accessories as required to complete the elevator installation.

### B. Related Sections:

- 1. Division 3 Concrete: Installing inserts, sleeves and anchors in concrete.
- 2. Division 4 Masonry: Installing inserts, sleeves and anchors in masonry.
- 3. Division 5 Metals:
  - a. Providing hoist beams, pit ladders, steel framing, auxiliary support steel and divider beams for supporting guide rail brackets.
  - b. Providing steel angle sill supports and grouting hoistway entrance sills and frames.
- 4. Division 9 Finishes: Providing elevator car finish flooring and field painting unfinished and shop primed ferrous materials.
- 5. Division 11.
- 6. Division 22 Plumbing:
  - a. Sump pit and oil interceptor.
- 7. 6. Division 23: Heating and Ventilation:
  - a. Heating and ventilating hoistways.
- 8. Division 26 Sections:
  - a. Providing electrical service to elevators. (note: fused disconnect switch to be provided as part of elevator manufacture product, see section 2.11 Miscellaneous elevator components for further details.)
  - b. Emergency power supply, transfer switch and auxiliary contacts.
  - c. Heat and smoke sensing devices.
  - d. Convenience outlets and illumination in hoistway and pit.
  - e. Emergency power indicator light/ system
- 9. Division 28.
- C. Work Not Included: General contractor shall provide the following in accordance with the requirements of the Model Building Code and ANSI A17.1 Code. For specific rules, refer to ANSI A17.1, Section 300 for hydraulic elevators. State or local requirements must be used if more stringent.
  - 1. Elevator hoist beams to be provided at top of elevator shaft. Beam must be able to accommodate proper loads and clearances for elevator installation and operation.
  - 2. Supply in ample time for installation by other trades, inserts, anchors, bearing plates, brackets, supports and bracing including all setting templates and diagrams for placement.
  - 3. Hatch walls require a minimum two hours of fire rating. Hoistway should be clear and plumb with variations not to exceed 1/2" at any point.
  - 4. Elevator hoistways shall have barricades, as required.
  - 5. Install bevel guards at 75° on all recesses, projections or setbacks over 2" (4" for A17.1 2000 areas) except for loading or unloading.
  - 6. Provide rail bracket supports at the pit, each floor and roof. For guide rail bracket supports, provide divider beams between hoistway at each floor and roof.
  - 7. Pit floor shall be level and free of debris. Reinforce dry pit to sustain normal vertical forces from rails and buffers.
  - 8. Where pit access is by means of the lowest hoistway entrance, a vertical ladder of non-combustible material extending 42" minimum, (48" minimum for A17.1-2000 areas) shall be provided at the same

- height, above the sill of access door or handgrips.
- 9. All wire and conduit should run remotely from the hoistways.
- 10. When heat, smoke or combustion sensing devices are required, connect to elevator control cabinet terminals. Contacts on the sensors should be sided for 12 volts D.C.
- 11. Install and furnish finished flooring in the elevator cab.
- 12. Finished floors and entrance walls are not to be constructed until after sills and door frames are in place. Consult elevator contractor for rough opening size. The general contractor shall supply the drywall framing so that the wall fire resistance rating is maintained when drywall construction is used.
- 13. Where sheet rock or drywall construction is used for front walls, it shall be of sufficient strength to maintain the doors in true lateral alignment. Drywall contractor to coordinate with elevator contractor.
- 14. Before the erection of rough walls and doors; erect hoistway sills, headers, and frames. After rough walls are finished; erect fascias and toe guards. Set sill level and slightly above finished floor at landings.
- 15. To maintain legal fire rating (masonry construction), door frames are to be anchored to walls and properly grouted in place.
- 16. The elevator wall shall interface with the hoistway entrance assembly and be in strict compliance with the elevator contractor's requirements.
- 17. General Contractor shall fill and grout around entrances, as required.
- 18. All walls and sill supports must be plumb where openings occur.
- 19. Locate a light fixture (200 lx / 19 fc) and convenience outlet in the pit with a switch located adjacent to the access door.
- 20. Provide telephone line, light fixture (200 lx / 19 fc), and convenience outlet in the hoistway at the landing where the elevator controller is located. Typically, this will be at the landing above the 1<sup>st</sup> floor. The final location must be coordinated with elevator contractor.
- 21. As indicated by elevator contractor, provide a light outlet for each elevator, in the center of the hoistway.
- 22. For signal systems and power operated door: provide ground and branch wiring circuits.
- 23. For car light and fan: provide a feeder and branch wiring circuits to elevator control cabinet.
- 24. Controller landing wall thickness must be a minimum of 8 inches thick. This is due to the controller being mounted on the second-floor landing in the door frame on the return side of the door. For center opening doors, the controller is located on the right-hand frame (from inside the elevator cab looking out). These requirements must be coordinated between the general contractor and the elevator contractor.
- 25. Cutting, patching and recesses to accommodate hall button boxes, signal fixtures, etc.

### 1.02 SUBMITTALS

- A. Product data: When requested, the elevator contractor will provide standard cab, entrance and signal fixture data to describe the product for approval.
- B. Shop drawings:
  - 1. Show equipment arrangement in the pit and hoistway. Provide plans, elevations, sections and details of assembly, erection, anchorage, and equipment location.
  - 2. Indicate elevator system capacities, sizes, performances, safety features, finishes and other pertinent information.
  - 3. Show floors served, travel distances, maximum loads imposed on the building structure at points of support and all similar considerations of the elevator work.
  - 4. Indicate electrical power requirements and branch circuit protection device recommendations.
- Powder Coat Paint selection: Submit manufacturer's standard selection charts for exposed finishes and materials.
- D. Plastic laminate selection: Submit manufacturer's standard selection charts for exposed finishes and materials.
- E. Metal Finishes: Upon request, standard metal samples provided.
- F. Operation and maintenance data. Include the following:

- 1. Owner's Manual and Wiring Diagrams.
- 2. Parts list, with recommended parts inventory.
- 3. All information needed to perform maintenance on this elevator.

### 1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: An approved manufacturer with minimum fifteen years' experience in manufacturing, installing, and servicing commercial elevators.
  - 1. Must be the manufacturer of the power unit, controller, signal fixtures, door operators cab, entrances, and all other major parts of the elevator operating equipment.
    - a. The major parts of the elevator equipment shall be manufactured in the United States, and not be an assembled system.
  - 2. The manufacturer shall have a documented, on-going quality assurance program.
  - 3. ISO-9001:2000 Manufacturer Certified
  - 4. ISO-14001:2004 Environmental Management System Certified
- B. Installer Qualifications: The manufacturer or an authorized agent of the manufacturer with not less than fifteen years of satisfactory experience installing elevators equal in character and performance to the project elevators.
- C. Regulatory Requirements:
  - 1. ASME/ANSI A17.1 Safety Code for Elevators and Escalators, latest edition or as required by the local building code.
  - 2. Building Code: National.
  - 3. NFPA 70 National Electrical Code.
  - 4. NFPA 80 Fire Doors and Windows.
  - 5. Americans with Disabilities Act Accessibility Guidelines (ADAAG).
- D. Fire-rated Entrance Assemblies: Opening protective assemblies including frames, hardware, and operation shall comply with ASTM E2074, UL10(B), and NFPA 80. Provide entrance assembly units bearing Class B or 1 1/2-hour label by a Nationally Recognized Testing Laboratory (2-hour label in Canada).
- E. Inspection and testing: Elevator Installer shall obtain and pay for all required inspections, tests, permits and fees for the elevator installation.
  - 1. Arrange for inspections and make required tests.
  - 2. Deliver to the Owner upon completion and acceptance of elevator work.

### 1.04 DELIVERY, STORAGE AND HANDLING

A. Manufacturing will deliver elevator materials, components and equipment and the contractor is responsible for providing secure and safe storage on the job site.

### 1.05 PROJECT CONDITIONS

A. Prohibited Use: Elevators shall not be used for temporary service or for any other purpose during the construction period before Substantial Completion and acceptance by the purchaser unless agreed upon by Elevator Contractor and General Contractor with signed the temporary agreement.

### 1.06 WARRANTY

A. Warranty: Submit elevator manufacturer's standard written warranty agreeing to repair, restore or replace defects in elevator work materials and workmanship not due to ordinary wear and tear or improper use or care for 12 months from the date of Substantial Completion.

### 1.07 MAINTENANCE

- A. Furnish maintenance and call back service for a period of 3 months for each elevator from the date of Substantial Completion during normal working hours, excluding callbacks. Service shall consist of a periodic examination of the equipment, adjustment, lubrication, cleaning, supplies and parts to keep the elevators in proper operation.
  - 1. The manufacturer shall have a service office and full-time service personnel within a 60-mile radius of the project site.
  - 2. Provide 4 elevator door keys.

### PART 2 - PRODUCTS

- 2.01 MANUFACTURERS, subject to the requirements stated herein;
  - A. Manufacturer: ThyssenKrupp Elevator [Basis of Design].
  - B. Otis.

### 2.02 MATERIALS, GENERAL

- A. Colors, patterns, and finishes: As selected by the Architect from manufacturer's standard colors, patterns, and finish charts.
- B. Steel and Stainless Steel:
  - 1. Shapes and bars: Carbon.
  - 2. Sheet: Cold-rolled steel sheet, commercial quality, Class 1, matte finish.
  - 3. Finish: Factory-applied powder coated for structural parts, and for architectural parts. Color selection must be based on elevator manufacture's standard selections.
- C. Flooring; not be elevator supplier, refer to the finish schedule.

### 2.03 HOISTWAY EQUIPMENT

- A. Platform: Fabricated frame of formed or structural steel shapes, gusseted and rigidly welded with a wood subfloor. The underside of the platform shall be fireproofed. The car platform shall be designed and fabricated to support one-piece loads weighing up to 25% of the rated capacity.
- B. Sling: Steel stiles affixed to a steel crosshead and bolstered with bracing members to remove strain from the car enclosure.
- C. Guide Rails: Steel, omega shaped, fastened to the building structure with steel brackets.
- D. Guide Shoes: Slide guides shall be mounted on top and bottom of the car.
- E. Buffers: Provide substantial buffers in the elevator pit. Mount buffers on a steel template that is fastened to the pit floor. Provide extensions if required by project conditions.
- F. Jack: Jack unit shall be of sufficient size to lift the gross load the height specified. Factory test jack to ensure adequate strength and freedom from leakage. Brittle material, such as gray cast iron, is prohibited in the jack construction. Provide the following jack type: Twin post holeless telescopic 3-stage. Jacks piped together, mounted one on each side of the car with each having telescopic sections designed to extend in a synchronized manner when oil is pumped into the assembly. Each jack section will be guided from within the casing or the plunger assembly used to house the section. Each plunger shall have a high-pressure sealing system which will not allow for seal movement or displacement during the course of operation. Each Jack Assembly shall have a check valve built into the assembly to allow for automatically re-syncing the two plunger sections by moving the jack to its fully contracted position. The jack shall be designed to be mounted on the pit floor or in a recess in the pit floor. Each jack section shall have a bleeder valve to discharge any air trapped in the

section. Provide a protective sleeve at any drilled shaft areas.

- G. Automatic Self-Leveling: Provide each elevator car with a self-leveling feature to automatically bring the car to the landings and correct for over-travel or undertravel. Self-leveling shall, within its zone, be automatic and independent of the operating device. The car shall be maintained approximately level with the landing irrespective of its load.
- H. Wiring, Piping, and Oil: Provide all necessary hoistway wiring in accordance with the National Electrical Code. All necessary code compliant pipe and fittings shall be provided to connect the power unit to the jack unit. Provide proper grade readily biodegradable oil as specified by the manufacturer of the power unit (see Power Unit section for further details).
- I. Pit moisture/water sensor located approximately 1 foot above the pit floor to be provided. Once activated, the elevator will perform "flooded pit operation", which will run the car up to the designated floor, cycle the doors and shut down and trip the circuit breaker shunt to remove 3 phase power from all equipment, including pit equipment.
- J. Motorized oil line shut-off valve shall be provided that can be remotely operated from the controller landing service panel. Also, a means for manual operation at the valve in the pit is required.

### 2.04 POWER UNIT

- A. Power Unit (Oil Pumping and Control Mechanism): A self-contained unit located in the elevator pit consisting of the following items:
  - 1. NEMA 4/Sealed Oil reservoir with tank cover including vapor removing tank breather
  - 2. An oil hydraulic pump.
  - 3. An electric motor.
  - 4. Electronic oil control valve with the following components built into the single housing; high-pressure relief valve, check valve, automatic unloading upstart valve, lowering and leveling valve, and electromagnetic controlling solenoids.
- B. Pump: Positive displacement type pump specifically manufactured for oil-hydraulic elevator service. Pump shall be designed for steady discharge with minimum pulsation to give smooth and quiet operation. The output of pump shall not vary more than 10 percent between no load and full load on the elevator car.
- C. Motor: Standard manufacture motor specifically designed for oil-hydraulic elevator service. Duty rating motors shall be capable of 80 starts per hour with a 30% motor run time during each start.
- D. Oil Control Unit: The following components shall be built into a single housing. Welded manifolds with separate valves to accomplish each function are not acceptable. Adjustments shall be accessible and be made without removing the assembly from the oil line.
  - 1. The relief valve shall be adjustable and be capable of bypassing the total oil flow without increasing back pressure more than 10 percent above that required to barely open the valve.
  - 2. Up start and stop valve shall be adjustable and designed to bypass oil flow during start and stop of the motor pump assembly. Valve shall close slowly, gradually diverting oil to or from the jack unit, ensuring smooth up starts and up stops.
  - 3. Check valve shall be designed to close quietly without permitting any perceptible reverse flow.
  - 4. Lowering valve and leveling valve shall be adjustable for down start speed, lowering speed, leveling speed and stopping speed to ensure smooth "down" starts and stops. The leveling valve shall be designed to level the car to the floor in the direction the car is traveling after slowdown is initiated.
  - 5. Provided with constant speed regulation in both up and down direction. Feature to compensate for load changes, oil temperature, and viscosity changes.
- E. Solid State Starting: Provide an electronic starter featuring adjustable starting currents.
- F. A secondary hydraulic power source (powered by 110VAC single phase) must be provided. This is required

- to be able to raise (reposition) the elevator in the event of a system component failure (i.e. pump motor, starter, etc.)
- G. Oil Type: Readily biodegradable that is USDA certified, bio-based product, ultra-low toxicity, readily biodegradable, energy efficient, high performing fluid made from canola oil with antioxidant, anticorrosive, antifoaming, and metal-passivating additives. Specially formulated for operating in environmentally sensitive areas. USDA certified the bio-based product, 95% bio-based content, per ASTM D6866.

### 2.05 HOISTWAY ENTRANCES

- A. Doors and Frames: Provide complete hollow metal type hoistway entrances at each hoistway opening bolted\knock down construction.
  - 1. Manufacturer's standard entrance design consisting of hangers, doors, hanger supports, hanger covers, fascia plates, sight guards, and necessary hardware.
  - 2. Main landing door & frame finish: Stainless steel panels, no. 4 brushed finish.
  - 3. Typical door & frame finish: Stainless steel panels with no. 4 brushed finish.
- B. Integrated Control System: the elevator controller to be mounted to hoistway entrance above 1st landing. The entrance at this level shall be designed to accommodate the control system and provide a means of access to critical electrical components and troubleshooting features. See section 2.09 Control System for additional requirements.
- C. At the controller landing, the hoistway entrance frame shall have space to accommodate and provide a lockable means of access (group 2 security) to a 3-phase circuit breaker.
- D. Interlocks: Equip each hoistway entrance with an approved type interlock tested as required by code. Provide door restriction devices as required by code.
- E. Door Hanger and Tracks: Provide sheave type two-point suspension hangers and tracks for each hoistway horizontal sliding door.
  - 1. Sheaves: Polyurethane tires with ball bearings properly sealed to retain grease.
  - 2. Hangers: Provide an adjustable device beneath the track to limit the up-thrust of the doors during operation.
  - 3. Tracks: Drawn steel shapes, smooth surface and shaped to conform to the hanger sheaves.
- F. Hoistway Sills: Extruded metal, with a groove(s) on the top surface. Provide mill finish aluminum.

### 2.06 CAR ENCLOSURE

### A. Car:

- 1. Walls: flat metal wall panels in 16 Ga. 5WL SS.
- 2. Canopy: Cold-rolled steel with hinged exit.
- 3. Ceiling: Suspended, with LED lights.
- 4. Cab Fronts, Return, Transom, Soffit and Strike: Provide panels faced with brushed stainless steel.
- Doors: Horizontal sliding car doors reinforced with steel for panel rigidity. Hang doors on sheave type hangers with polyurethane tires that roll on a polished steel track and are guided at the bottom by nonmetallic sliding guides. Fast opening; low maintenance type.
  - a. Door Finish: Stainless steel panels: No. 4 brushed finish.
  - b. Cab Sills: Extruded aluminum, mill finish.
- 6. Handrail: Provide 2" flat bar on the side and rear walls. Handrails shall have a stainless steel, no. 4 brushed finish.
- 7. Ventilation: Manufacturer's standard exhaust fan, mounted on the car top.
- B. Car Top Inspection: Provide a car top inspection station with an "Auto-Inspection" switch, an "emergency stop" switch, and constant pressure "up and down" direction and safety buttons to make the normal operating devices inoperative. The station will give the inspector complete control of the elevator. The car top inspection

station shall be mounted in the door operator assembly.

### 2.07 DOOR OPERATION

- A. Door Operation: Provide a direct current motor driven heavy duty operator designed to operate the car and hoistway doors simultaneously. Door movements shall be electrically cushioned at both limits of travel and the door operating mechanism shall be arranged for manual operation in event of power failure. Doors shall automatically open when the car arrives at the landing and automatically close after an adjustable time interval or when the car is dispatched to another landing. Closed-loop, microprocessor controlled motor-driven linear door operator, with adjustable torque limits, also acceptable. AC controlled units with oil checks or other deviations are not acceptable.
  - 1. No Un-Necessary Door Operation: The car door shall open only if the car is stopping for a car or hall call, answering a car or hall call at the present position or selected as a dispatch car.
  - 2. Door Open Time Saver: If a car is stopping in response to a car call assignment only (no coincident hall call), the current door hold open time is changed to a shorter field programmable time when the electronic door protection device is activated.
  - 3. Double Door Operation: When a car stops at a landing with concurrent up and down hall calls, no car calls, and no other hall call assignments, the car door opens to answer the hall call in the direction of the car's current travel. If an onward car call is not registered before the door closes to within 6 inches of fully closed, the travel will reverse and the door will reopen to answer the other call.
  - 4. Nudging Operation: The doors shall remain open as long as the electronic detector senses the presence of a passenger or object in the door opening. If door closing is prevented for a field programmable time, a buzzer will sound. When the obstruction is removed, the door will begin to close at reduced speed. If the infra-red door protection system detects a person or object while closing on nudging, the doors will stop and resume closing only after the obstruction has been removed.
  - 5. Limited Door Reversal: If the doors are closing and the infra-red beam(s) is interrupted, the doors will reverse and reopen partially. After the obstruction is cleared, the doors will begin to close.
  - 6. Door Open Watchdog: If the doors are opening, but do not fully open after a field adjustable time, the doors will recycle closed then attempt to open six times to try and correct the fault.
  - 7. Door Close Watchdog: If the doors are closing, but do not fully close after a field adjustable time, the doors will recycle open then attempt to close six times to try and correct the fault.
  - 8. Door Close Assist: When the doors have failed to fully close and are in the recycle mode, the door drive motor shall have increased the torque applied to possibly overcome mechanical resistance or differential air pressure and allow the door to close.
- B. Door Protection Devices: Provide a door protection system using 150 or more microprocessor controlled infra-red light beams. The beams shall project across the car opening detecting the presence of a passenger or object. If door movement is obstructed, the doors shall immediately reopen.

### 2.08 CAR OPERATING STATION

- A. Car Operating Station, General: The main car control in each car shall contain the devices required for specific operation mounted in an integral swing return panel requiring no applied faceplate. Swing return shall have a brushed stainless steel finish. The main car operating panel shall be mounted in the return and comply with handicap requirements.
  - Blue illuminated pushbuttons that using long lasting LED's shall be included for each floor served, and emergency buttons and switches shall be provided per code. Switches for car light and accessories shall be provided.
- B. Emergency Communications System: Integral phone system provided. Provide any required indicator lights for emergency power.
- C. Auxiliary Operating Panel: Not Required
- D. Column Mounted Car Riding Lantern: A car riding lantern shall be installed in the elevator cab and located in the entrance. The lantern, when illuminated, will indicate the intended direction of travel. The lantern will

illuminate and a signal will sound when the car arrives at a floor where it will stop. The lantern shall remain illuminated until the door(s) begin to close.

E. Special Equipment: Not Applicable

### 2.09 CONTROL SYSTEMS

- A. Controller: Shall be integrated into a hoistway entrance jamb. Should be microprocessor based, software oriented and protected from environmental extremes and excessive vibrations in an NEMA 1 enclosure. Control of the elevator shall be automatic in operation by means of push buttons in the car numbered to correspond to floors served, for registering car stops, and by "up-down" push buttons at each intermediate landing and "call" push buttons at terminal landings.
- B. Service Panel to be located outside the hoistway in the controller entrance jamb and shall provide the following functionality/features:
  - 1. Access to main control board and CPU
  - 2. Main controller diagnostics
  - 3. The main controller fuses
  - 4. Universal Interface Tool (UIT)
  - 5. Remote valve adjustment
  - 6. Electronic motor starter adjustment and diagnostics
  - 7. Operation of pit motorized shut-off valve with LED feedback to the state of the valve in the pit
  - 8. Operation of auxiliary pump/motor (secondary hydraulic power source)
  - 9. Operation of electrically assisted manual lowering
  - 10. Provide male plug to supply 110VAC to the controller
  - 11. Run/Stop button
- C. Automatic Light and Fan shut down: The control system shall evaluate the system activity and automatically turn off the cab lighting and ventilation fan during periods of inactivity. The settings shall be field programmable.
- D. Special Operation: Not Applicable
- E. Emergency Power Operation: (Battery Lowering 10-DOC) When the loss of normal power is detected, a battery lowering feature is to be activated. The elevator will lower to a predetermined level and open the doors. After passengers have exited the car, the doors will close and the car will shut-down. When normal power becomes available, the elevator will automatically resume operation. The battery lowering feature is included in the elevator contract and does not utilize a building supplied standby power source.

### 2.10 HALL STATIONS

- A. Hall Stations, General: Provide buttons with blue-illuminating LED halos to indicate that a call has been registered at that floor for the indicated direction. Provide 1 set of pushbutton risers. Provide one pushbutton riser with faceplates having a brushed stainless steel finish.
  - 1. Phase 1 firefighter's service key switch, with instructions, shall be incorporated into the hall station at the designated level.
  - 2. Vandal resistant.
- B. Floor Identification Pads: Provide door jamb pads on each floor. Jamb pads shall comply with Americans with Disabilities Act (ADA) requirements.
- C. Hall Position Indicator: Not Applicable
- D. Hall Lanterns: Not Applicable
- E. Special Equipment: Not Applicable

### 2.11 MISCELLANEOUS ELEVATOR COMPONENTS

- A. Oil Hydraulic Silencer: Install multiple oil hydraulic silencers (muffler device) at the power unit location. The silencers shall contain pulsation absorbing material inserted in a blowout proof housing.
- B. Lockable three phase circuit breakers with auxiliary contact with shunt trip capability to be provided. Circuit breaker to be located behind locked panel (Group 2 security access) at controller landing entrance jamb and should be sized according to the National Electrical Code.
- C. Lockable single phase 110V circuit breaker for cab light and fan to be provided. Circuit breaker to be located behind locked panel (Group 2 security access) at controller landing entrance jamb should be sized according to the National Electrical Code.
- D. Additional cabling for elevator camera, intercom and detention locking panel interface.

### PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Before starting elevator installation, inspect hoistway, hoistway openings, pits and control space, as constructed and verify all critical dimensions, and examine supporting structures and all other conditions under which elevator work is to be installed. Do not proceed with elevator installation until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

### 3.02 INSTALLATION

- A. Install elevator systems components and coordinate installation of hoistway wall construction.
  - 1. Work shall be performed by competent elevator installation personnel in accordance with ASME A17.1, manufacturer's installation instructions and approved shop drawings.
  - 2. Comply with the National Electrical Code for electrical work required during installation.
- B. Coordination: Coordinate elevator work with the work of other trades, for proper time and sequence to avoid construction delays. Use benchmarks, lines, and levels designated by the Contractor, to ensure dimensional coordination of the work.
- C. Alignment: Coordinate installation of hoistway entrances with the installation of elevator guide rails for accurate alignment of entrances with cars. Where possible, delay final adjustment of sills and doors until the car is operable in the shaft. Reduce clearances to minimum safe, workable dimensions at each landing.
- D. Lubricate operating parts of the system where recommended by the manufacturer.

# 3.03 FIELD QUALITY CONTROL

- A. Acceptance testing: Upon completion of the elevator installation and before permitting the use of the elevator, perform acceptance tests as required by A17.1 Code and local authorities having jurisdiction. Perform other tests, if any, as required by governing regulations or agencies.
- B. Advise Owner, Contractor, Architect, and governing authorities in advance of dates and times tests are to be performed on the elevator.

### 3.04 ADJUSTING

A. Make necessary adjustments to operating devices and equipment to ensure elevator operates smoothly and accurately.

### 3.05 CLEANING

- A. Before final acceptance, remove protection from finished surfaces and clean and polish surfaces in accordance with manufacturer's recommendations for the type of material and finish provided. Stainless stall shall be cleaned with soap and water and dried with a non-abrasive surface; shall not be cleaned with bleached-based cleansers.
- B. At the completion of elevator work, remove tools, equipment, and surplus materials from the site. Clean equipment rooms and hoistway. Remove trash and debris.

### 3.06 PROTECTION

A. At the time of Substantial Completion of elevator work, or portion thereof, provide suitable protective coverings, barriers, devices, signs, or other such methods or procedures to protect elevator work from damage or deterioration. Maintain protective measures throughout the remainder of construction period.

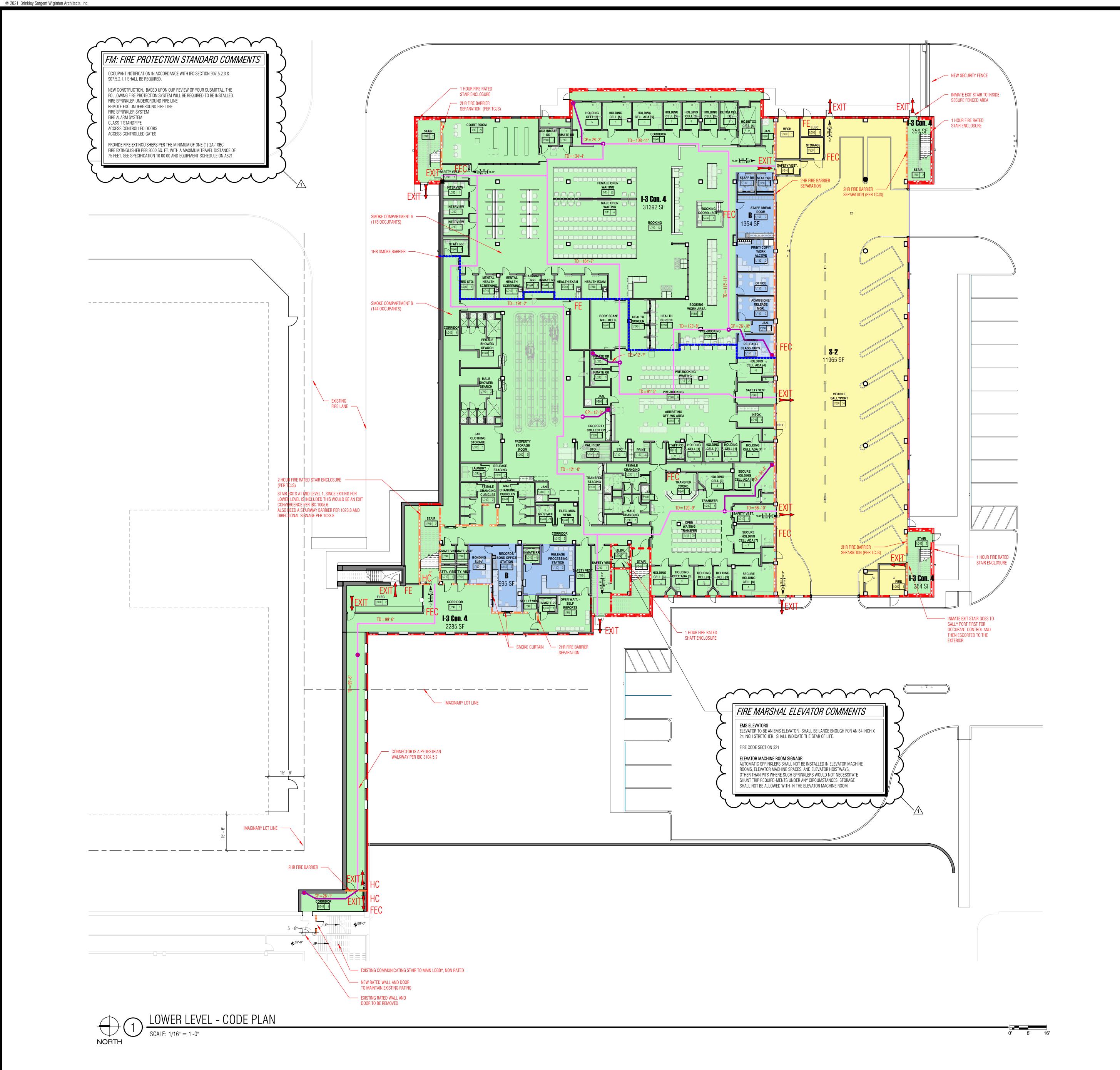
### 3.07 DEMONSTRATION

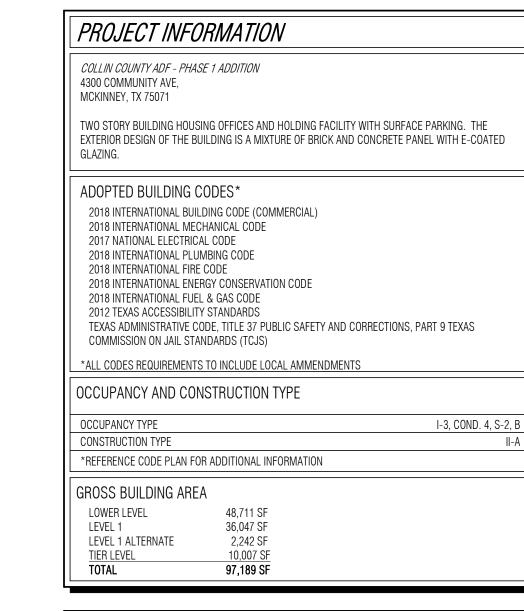
- A. Instruct Owner's personnel in proper use, operations, and daily maintenance of elevators. Review emergency provisions, including emergency access and procedures to be followed at the time of failure in operation and other building emergencies. Train Owner's personnel in normal procedures to be followed in checking for sources of operational failures or malfunctions.
- B. Make a final check of each elevator operation, with Owner's personnel present, immediately before the date of substantial completion. Determine that control systems and operating devices are functioning properly.

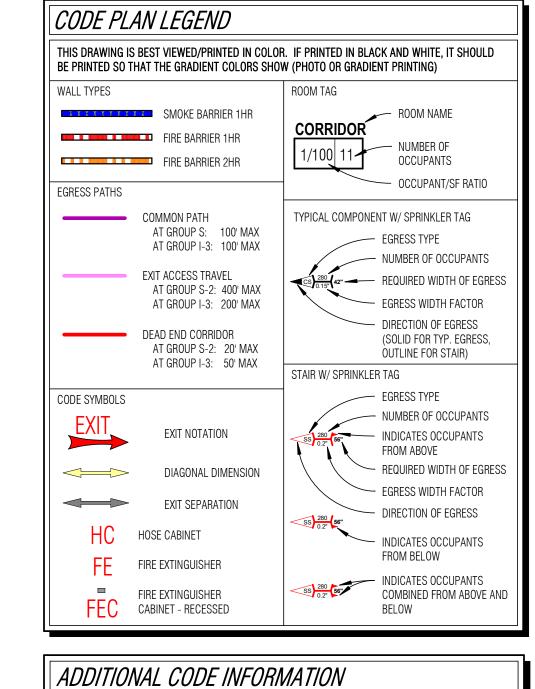
### 3.08 ELEVATOR SCHEDULE

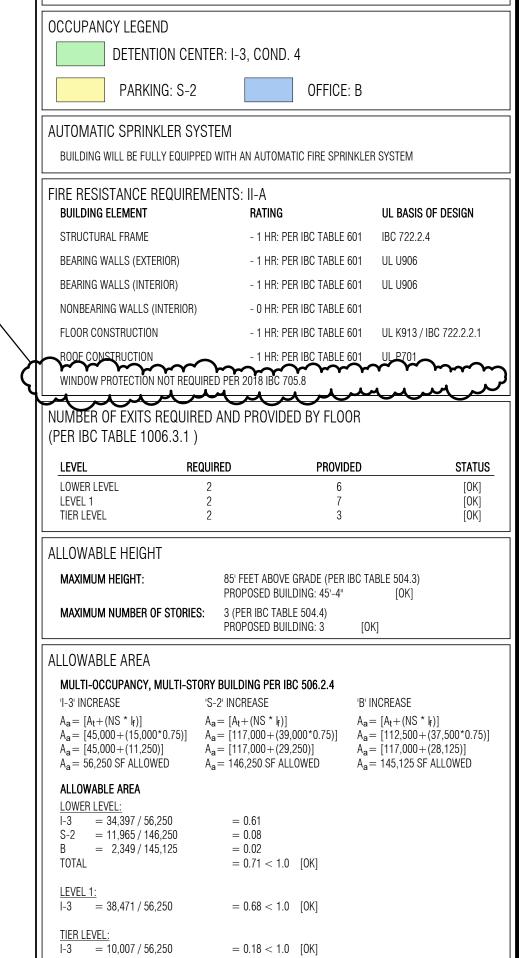
- A. Elevator Qty. 1
  - 1. Elevator Model: Hydraulic with shaft
  - 2. Rated Capacity: 4500 lbs.
  - 3. \*AD 2 Rated Speed: 125 ft./min. up and down
  - 4. Operation System: TAC32
  - 5. Travel: refer to drawings
  - 6. Landings: 2 total
  - 7. Openings:
    - a. Front: 2
    - b. Rear: 0
  - 8. Clear Car Inside: 5'-8"wide x 7'- 91/2" deep
  - 9. Cab Height: 7'-4" nominal
  - 10. Hoistway Entrance Size: 4'-0" wide x 7'-0" high
  - 11. Door Type: Single Speed, side opening
  - 12. Power Characteristics: as listed on electrical drawings.
  - 13. Seismic Requirements: Zone 2
  - 14. Walls: Raised 5WL stainless steel
  - 15. Flooring: not in this section's scope, but coordinate thickness with the finish schedule.

### **END OF SECTION**









5U500V 0005		
ENERGY CODE		
CLIMATE ZONE: 3A		
ROOF - INSULATION ENTIRELY ABOVE DECK	R-25 C.I.	
WALLS - MASS	R-7.6 C.I.	
WALLS - BELOW GRADE	NR	
FLOORS - MASS	R-10 C.I.	
SLAB ON GRADE - UNHEATED	NR	
DOORS - NONSWINGING OPAQUE	R-4.75	
DOORS - SWINGING OPAQUE	0.61 U	
DOORS - GARAGE < 14% GLAZING	0.31U	
FENESTRATION - FIXED	0.46 U	
FENESTRATION - OPERABLE	0.60 U	
FENESTRATION - ENTRANCE DOORS	0.77 U	
GLAZING SHGC	0.25	
SKYLIGHT	0.55 U	
SKYLIGHT - SHGC	0.35	
ROOFS (COMPLY WITH ONE)  A) THREE-YEAR-AGED SOLAR REFLECTANCE INDEX OF 55 AND 3-YEAR AGED THERMAL EMITTANCE OF 0.75  B) THREE- YEAR-AGED SOLAR REFLECTANCE INDEX OF 64		

# COLLIN COUNTY ADF. PHASE 1 ADDITION

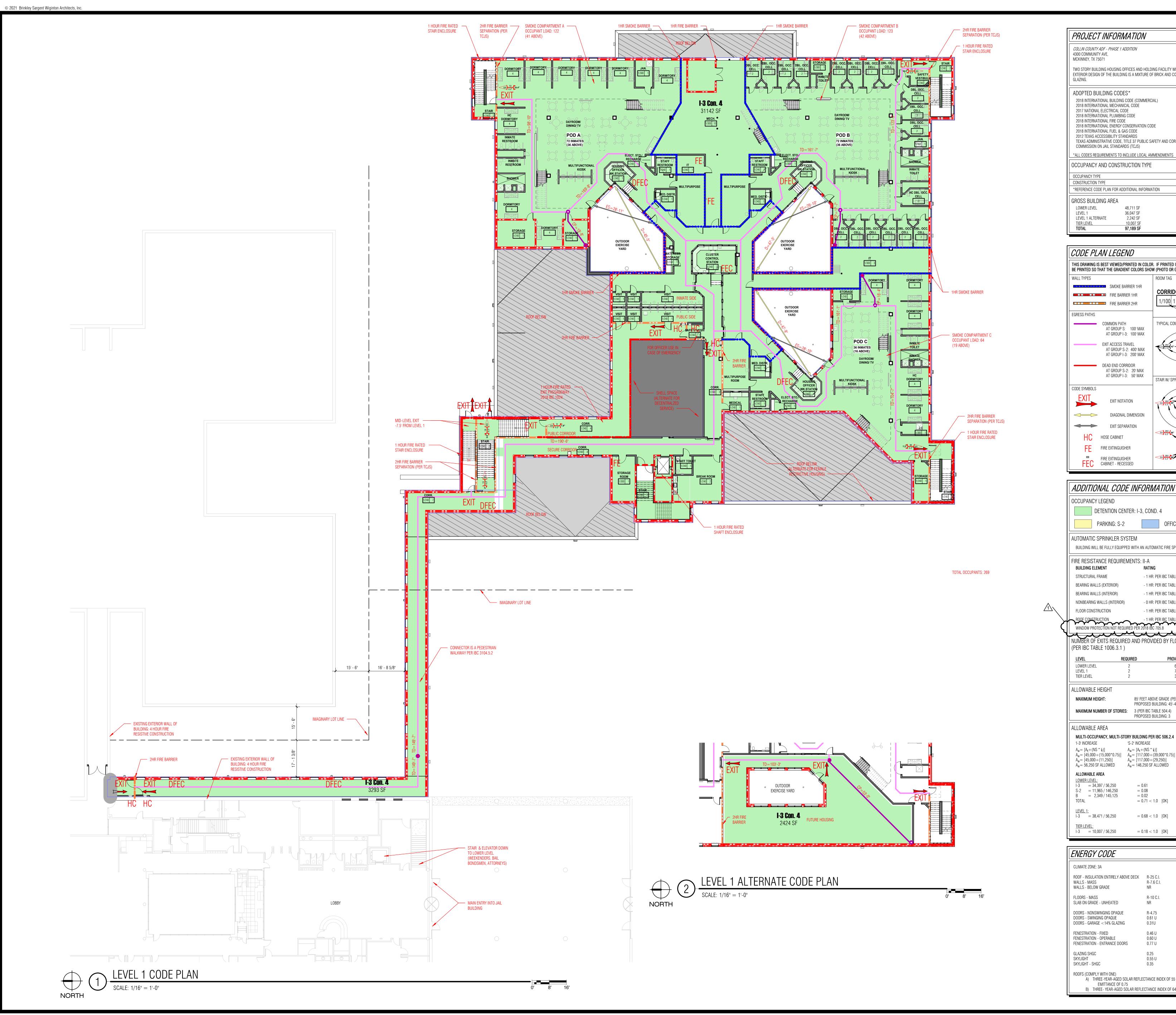
HISTORY

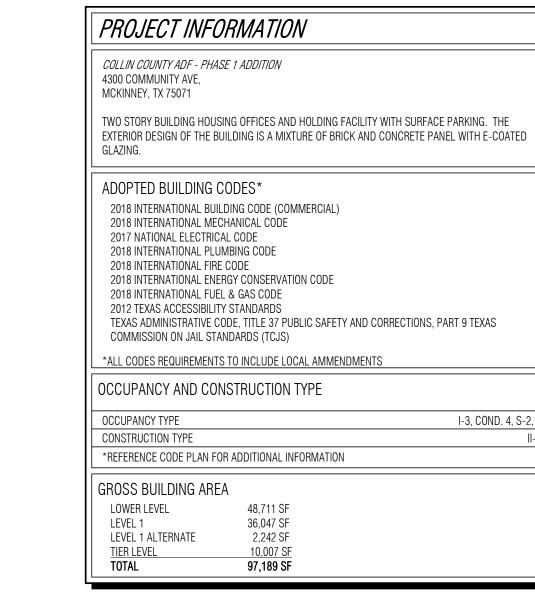
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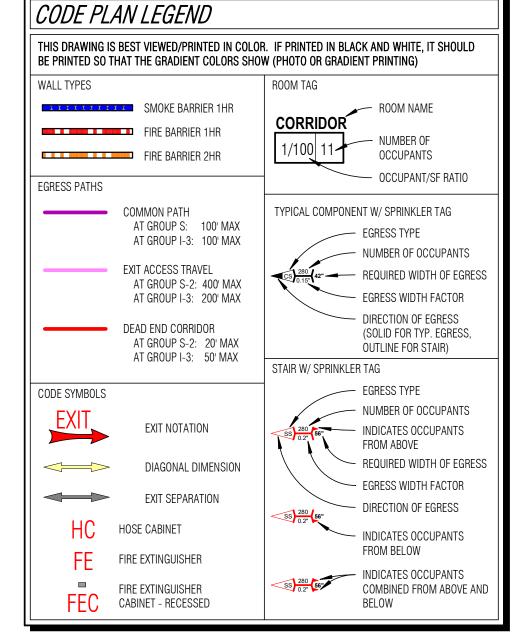
1 08/18/2021 ADDENDUM #2

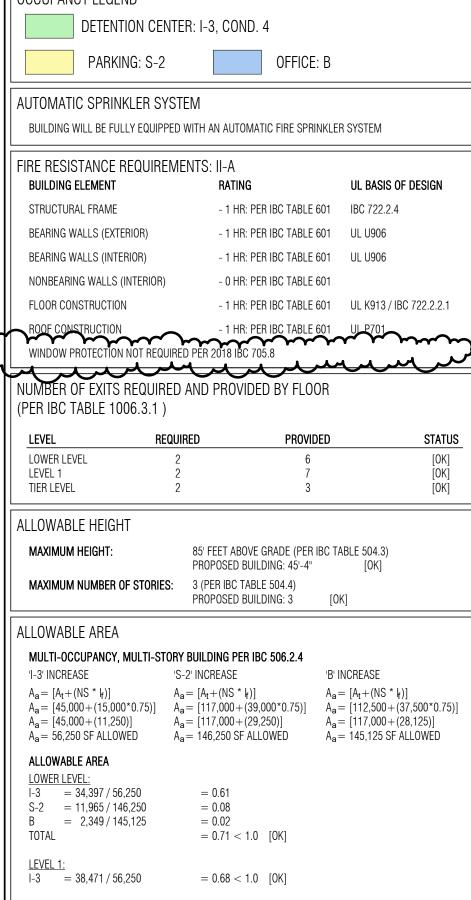
LOWER LEVEL -

CODE PLAN



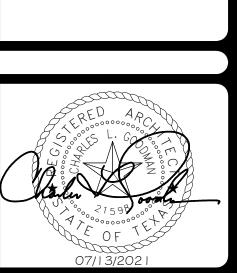




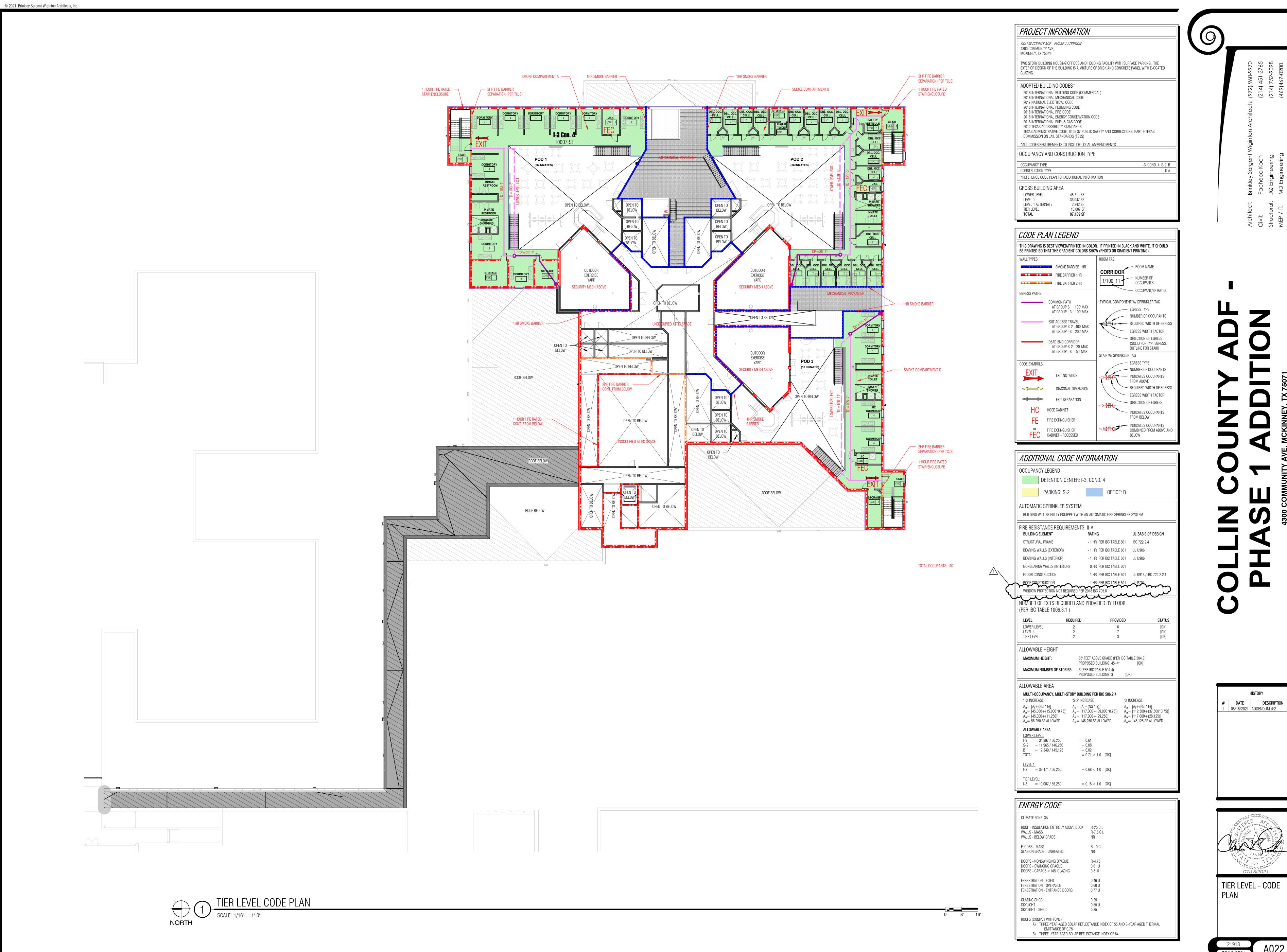


NERGY CODE	
LIMATE ZONE: 3A	
OOF - INSULATION ENTIRELY ABOVE DECK	R-25 C.I.
VALLS - MASS	R-7.6 C.I.
VALLS - BELOW GRADE	NR
LOORS - MASS	R-10 C.I.
:LAB ON GRADE - UNHEATED	NR
000RS - NONSWINGING OPAQUE	R-4.75
100RS - SWINGING OPAQUE	0.61 U
100RS - GARAGE <14% GLAZING	0.31U
ENESTRATION - FIXED	0.46 U
ENESTRATION - OPERABLE	0.60 U
ENESTRATION - ENTRANCE DOORS	0.77 U
ILAZING SHGC	0.25
KYLIGHT	0.55 U
KYLIGHT - SHGC	0.35
OOFS (COMPLY WITH ONE)  A) THREE-YEAR-AGED SOLAR REFLECTANCE INDEX OF 55 AND 3-YEAR AGED THERMAL EMITTANCE OF 0.75  B) THREE- YEAR-AGED SOLAR REFLECTANCE INDEX OF 64	

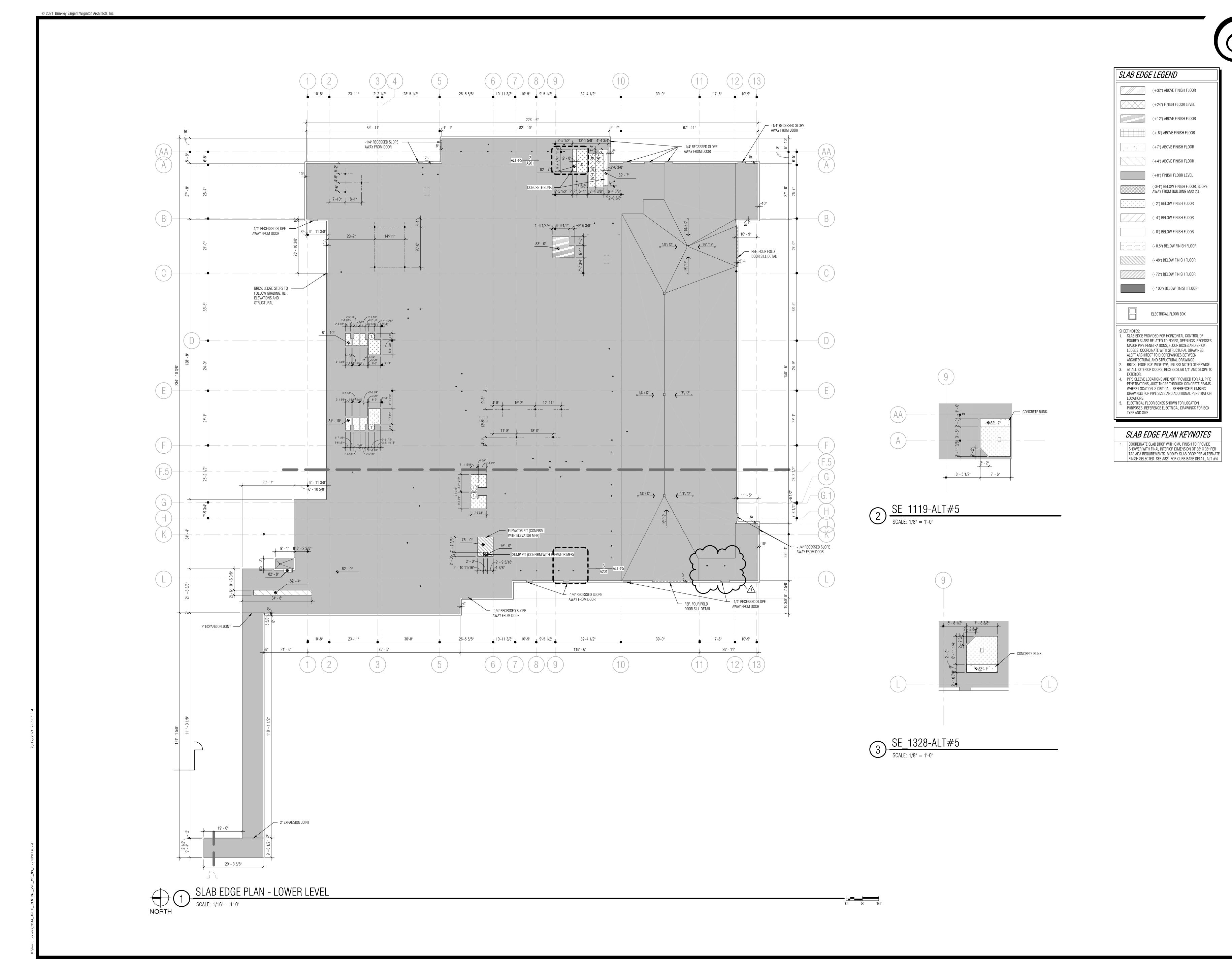
HISTORY # DATE DESCRIPTION
1 08/18/2021 ADDENDUM #2



LEVEL 1 - CODE PLAN



HISTORY



COUNTY ADF-PHASE 1 ADDITION WIGINTONA

**BRINKLEY SARGENT** 

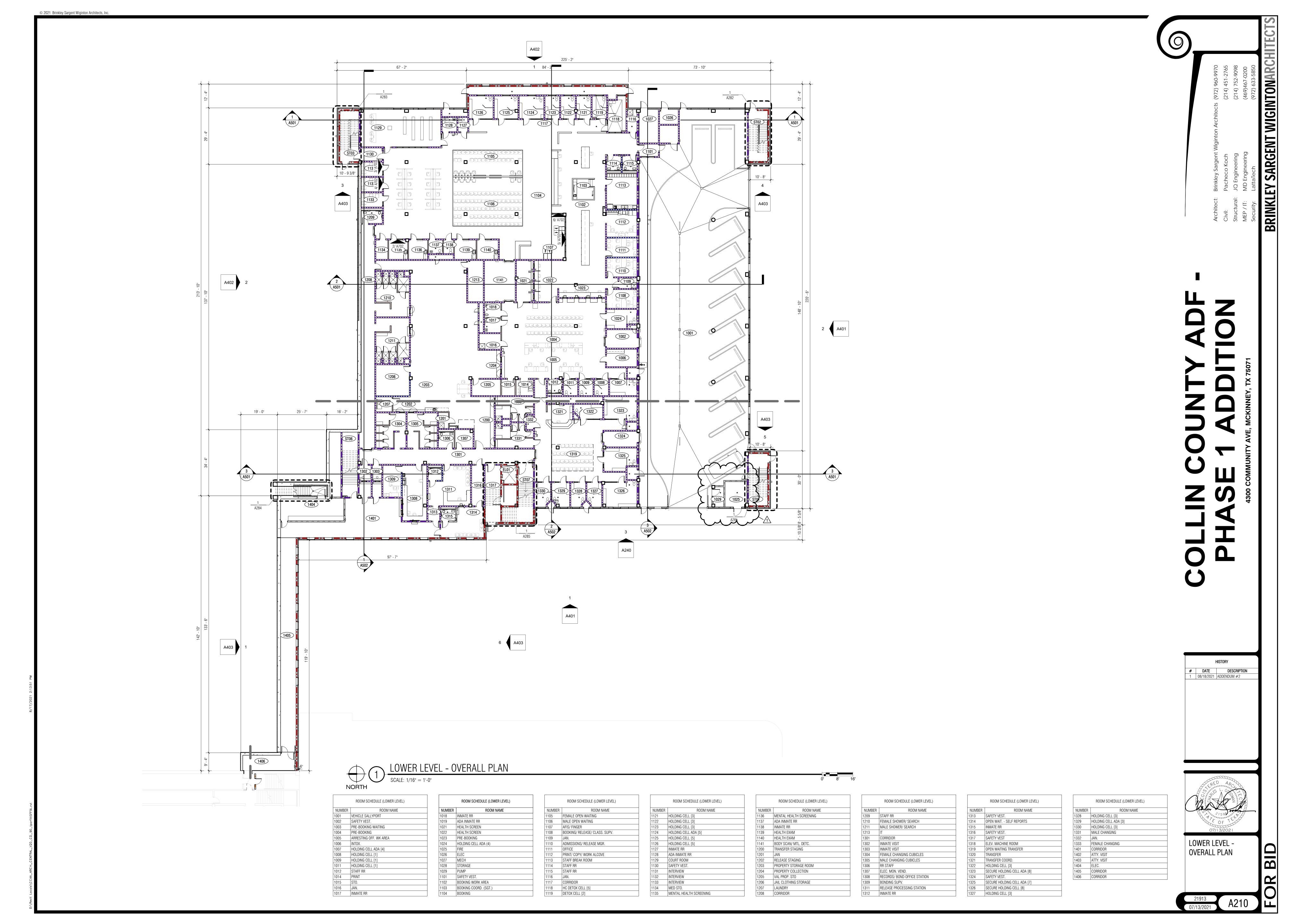
RED ARC Societ L. Good ALL SOCIAL S

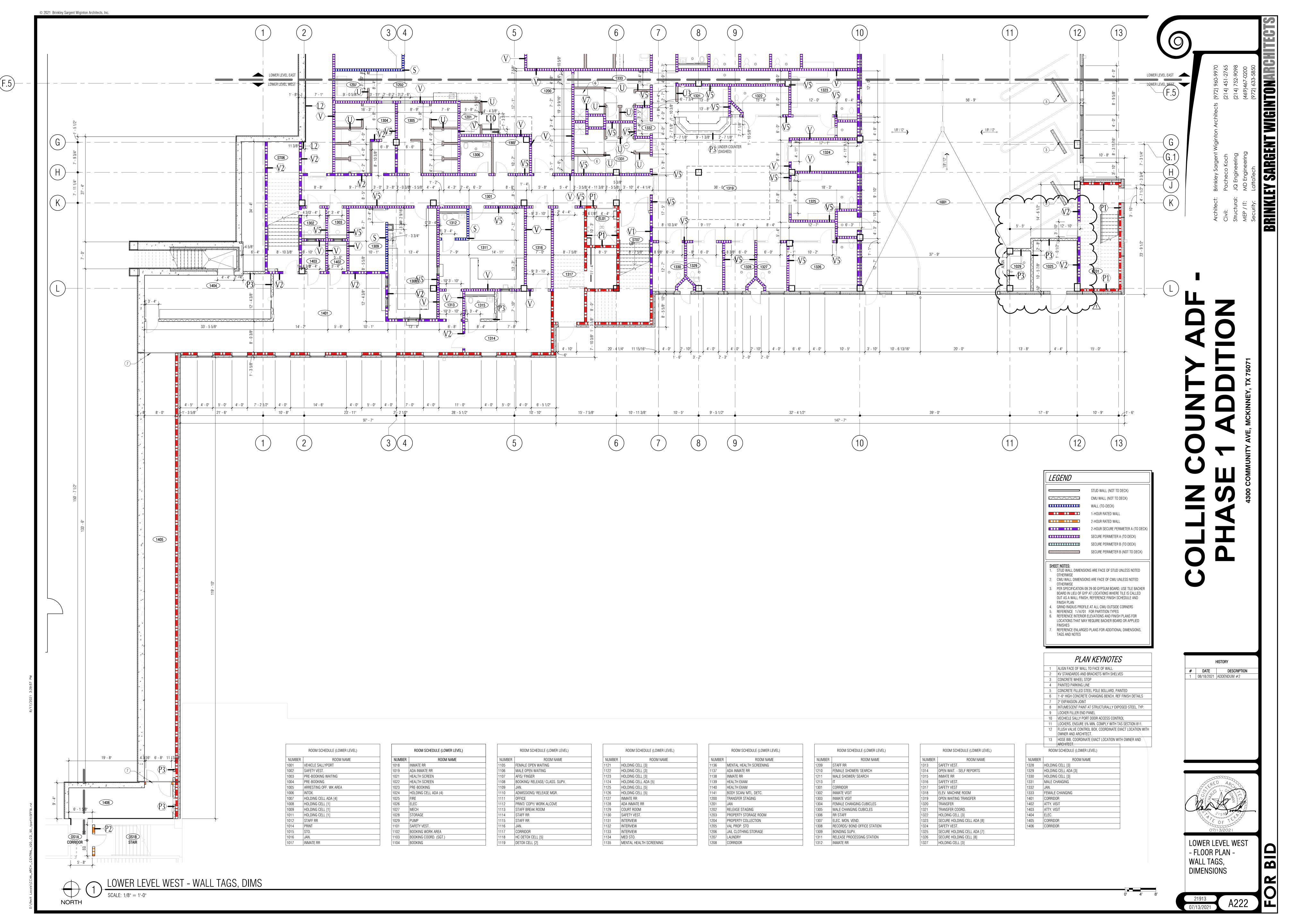
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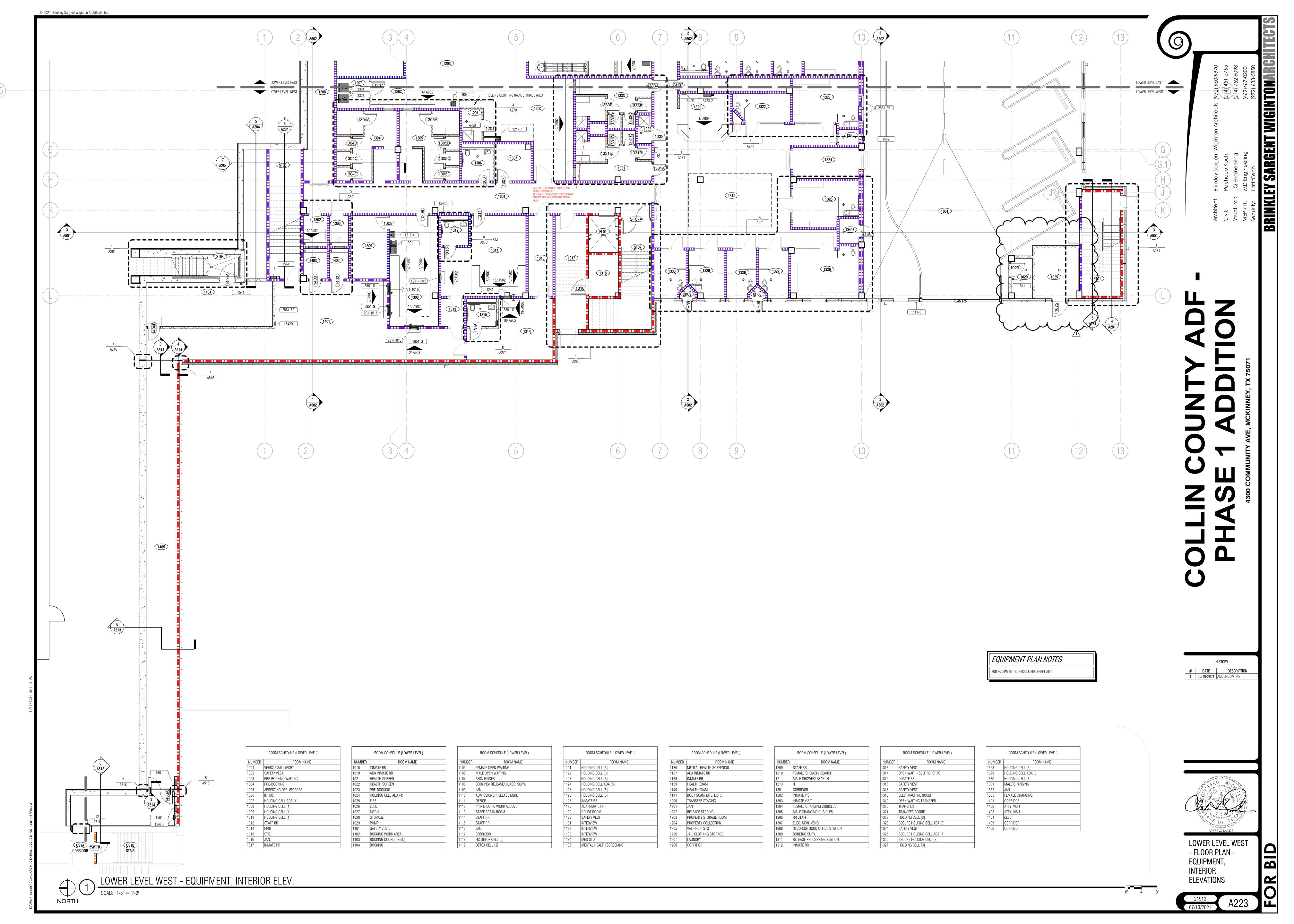
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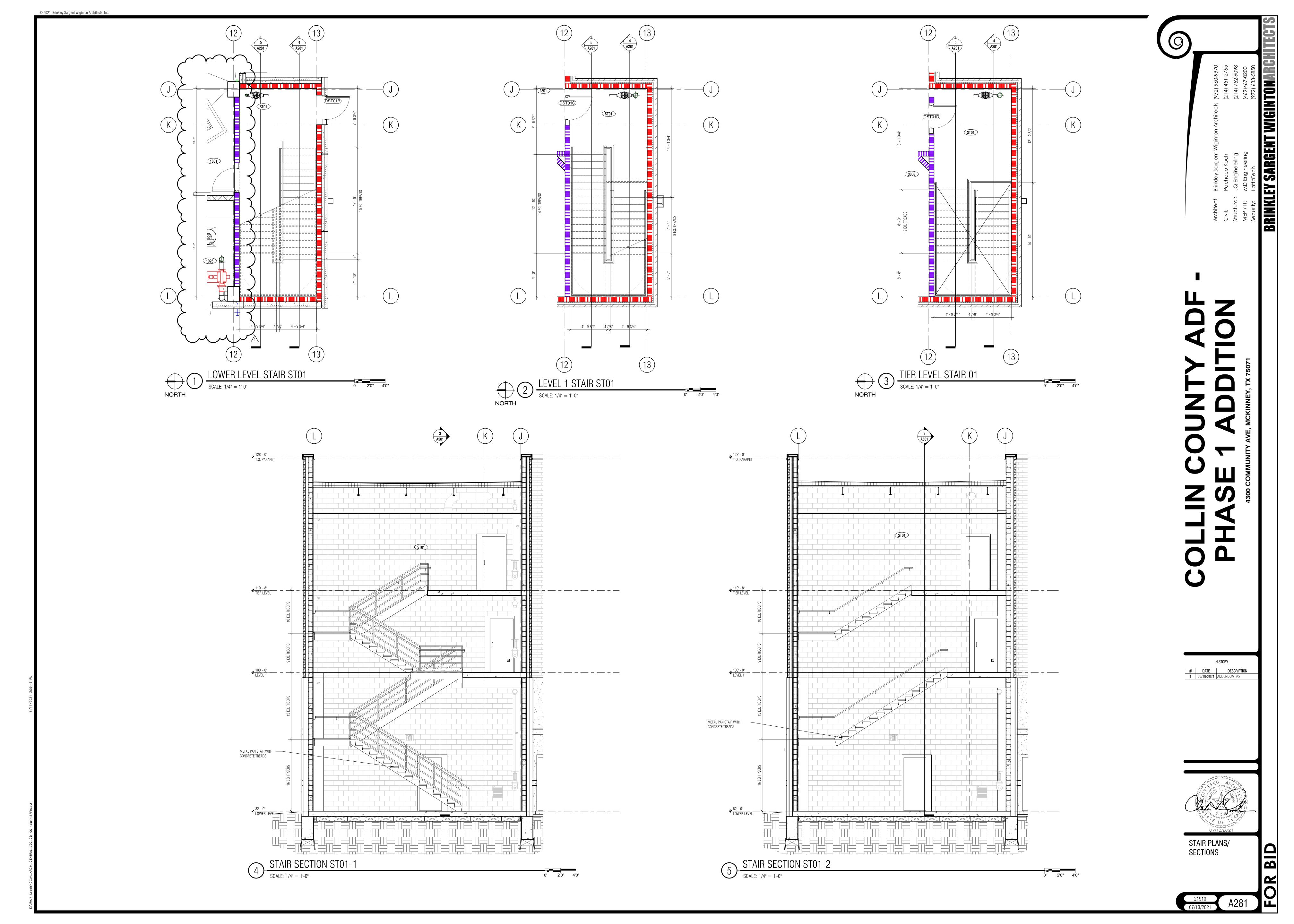
SLAB EDGE PLAN -LOWER LEVEL

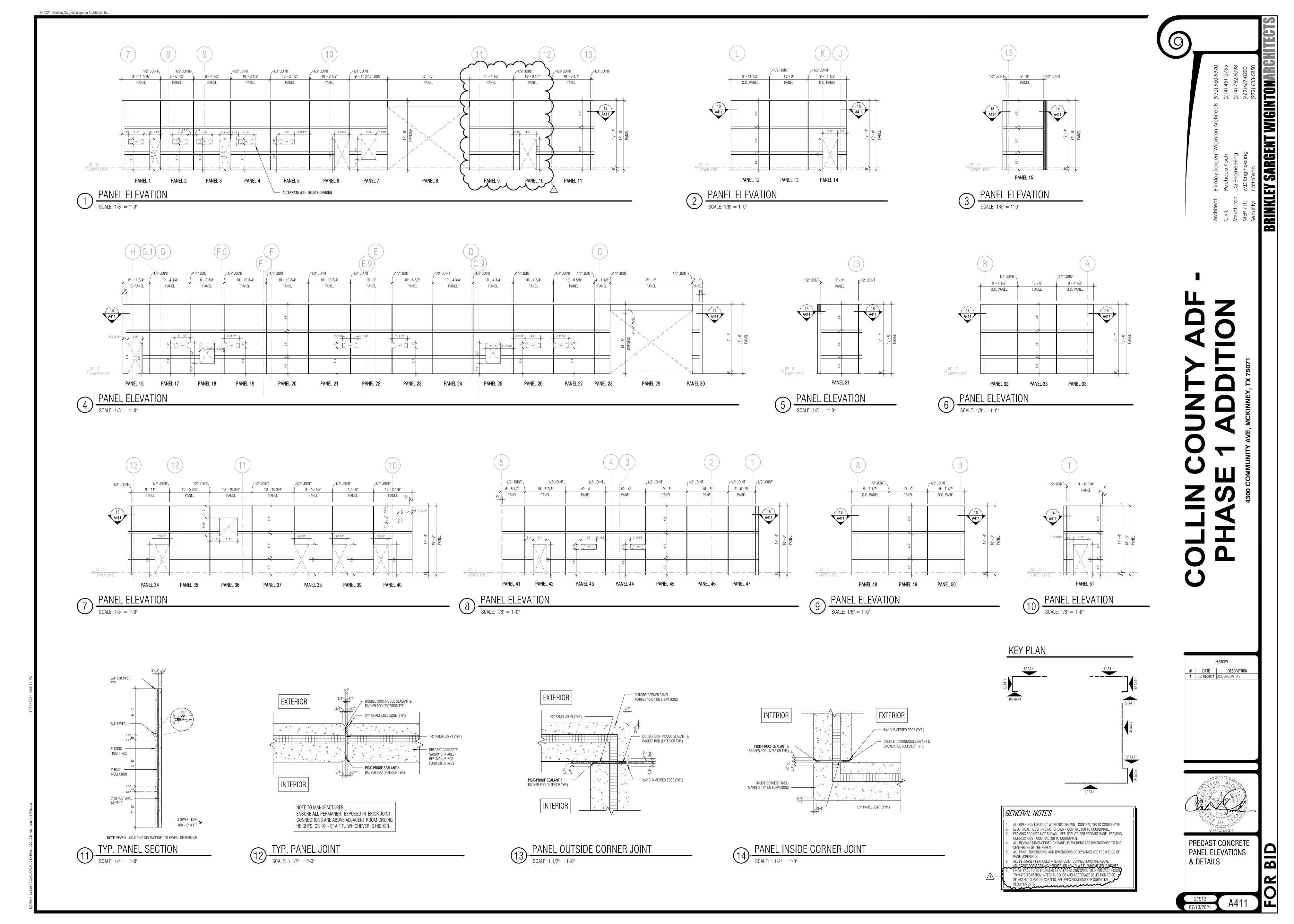
21913 A2

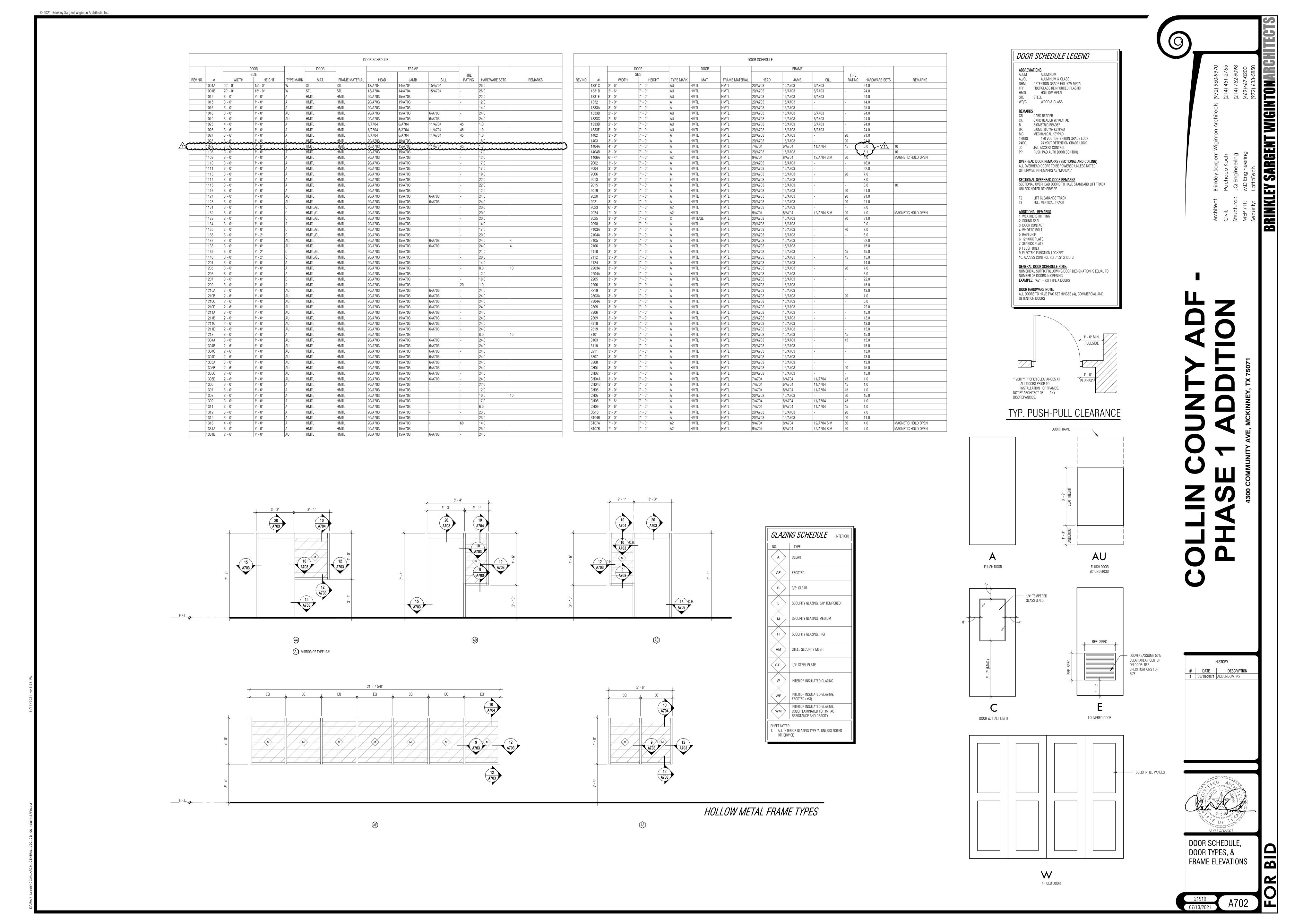












## **ROOM FINISH SCHEDULE**

1405 CORRIDOR

	ΝΑΜΓ	EI OOD	DACE	N		WALL	W	FINICH NOTE
# 01 VEI	NAME HICLE SALLYPORT	FLOOR SC	PB1	N P1	P1	P1	P1	FINISH NOTE
	rety vest. Re-booking waiting	CPT1 VS1	RB1 RB1	P2	P2	P2	P2	5
	RE-BOOKING WAITING	VS1	RB1	P1	P1	P1	P1	5
	RRESTING OFF. WK AREA TOX.	VS1 SC	RB1	 P1	 P1, P4	 P1	 P1	5
	DLDING CELL ADA [4]	SC		P3	P1, P4	P3	P3	0
	DLDING CELL [1]	SC		P3	P3	P3	P3	
	OLDING CELL [1] OLDING CELL [1]	SC SC		P3	P3	P3	P3	
	AFF RR	RES1	B1	EP1	EP1	EP1	EP1	
14 PR 15 ST	RINT TO.	VS1 VS1	RB1	P1 P1	P1 P1	P1 P1	P1 P1	
16 JAN		SC		P1	P1	P1	P1	
	MATE RR MATE RR	RES1	B1 B1	EP1 EP1	EP1 EP1	EP1 EP1	EP1 EP1	
21 HE	EALTH SCREEN	VS1	RB1	P1	P1	P1	P1	
	EALTH SCREEN RE-BOOKING	VS1 VS1	RB1	P1 P1	P1 P1	P1 P1	P1 P1	
24 H0	DLDING CELL ADA (4)	SC		P3	P3	P3	P3	
25 FIR 26 ELE		SC SC						
	ECH	SC						
	ORAGE JMP	SC SC						
	FETY VEST.	CPT1	RB1	P2	P2	P2	P2	
	OOKING WORK AREA	VS1	RB1	P1	P1	P1	P1	
	OOKING COORD. (SGT.) OOKING	CPT2 VS1	RB1 RB1	P1	P1	P1	P1	5
05 FEI	MALE OPEN WAITING	CPT2	RB1				P2	
	ALE OPEN WAITING IS/ FINGER	CPT2 VS1	RB1	 P1	 P1	P2 P1	 P1	
	OOKING/ RELEASE/ CLASS. SUPV.	CPT2	RB1	P1	P1	P1	P1	
09 JAN		SC CPT2	 RR1	P1	P1	P1	P1	<u> </u>
	OMISSIONS/ RELEASE MGR. FICE	CPT2 CPT2	RB1 RB1	P1 P1	P1 P1	P1 P1	P1 P1	1
12 PR	RINT/ COPY/ WORK ALCOVE	VS1	RB1	P1	P1	P1	P1	
	AFF BREAK ROOM AFF RR	VS1 VS1	RB1	P1 EP1	P1 EP1	P1 EP1	P1 EP1	
15 ST/	AFF RR	VS1	RB1	EP1	EP1	EP1	EP1	
16 JAN 17 CO	N. DRRIDOR	SC VS1	 RB1	P1 P1	P1 P1	P1 P1	P1 P1	ļ
18 HC	C DETOX CELL [5]	SC	 KR1	P3	P3	P1 P3	P1 P3	
19 DE	TOX CELL [2]	SC		P3	P3	P3	P3	
	OLDING CELL [3] OLDING CELL [3]	SC SC		P3	P3	P3	P3	
23 HO	DLDING CELL [3]	SC		P3	P3	P3	P3	
	DLDING CELL ADA [5] DLDING CELL [5]	SC SC		P3	P3	P3	P3	1
	DLDING CELL [5]	SC		P3	P3	P3	P3	
	MATE RR	RES1	B1	EP1	EP1	EP1	EP1	
	DA INMATE RR DURT ROOM	RES1 CPT2	B1 RB1	EP1	EP1	EP1	EP1	-
	FETY VEST.	CPT1	RB1	P2	P2	P2	P2	
	Terview Terview	CPT2	RB1 RB1	WC1	P1 P1	WC1	P1 P1	
	TERVIEW	CPT2	RB1	WC1	P1	WC1	P1	
	ED STO. ENTAL HEALTH SCREENING	VS1 VS1	RB1	P1 P1	P1 P1	P1 P1	P1 P3	
	ENTAL HEALTH SCREENING	VS1	RB1	P1	P1	P1	P3	
	DA INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
	Mate RR Ealth exam	RES1 VS1	B1 RB1	EP1 P1	EP1	EP1 P1	EP1 P3	
10 HE	EALTH EXAM	VS1	RB1	P1	P1	P1	P3	
	DDY SCAN/ MTL. DETC. ANSFER STAGING	VS1 VS1	RB1 RB1	P1 P1	P1 P1	P1 P1	P1 P1	
od JAN		SC		P1	P1	P1	P1	
	ELEASE STAGING ROPERTY STORAGE ROOM	VS1 VS1	RB1	P1 P1	 P1	P1 P1	P1	
	ROPERTY COLLECTION	VS1	RB1		P1	P1	P1	
	L PROP. STO	VS1	RB1	P1	P1	P1	P1	
	IL CLOTHING STORAGE UNDRY	VS1 VS1	RB1 RB1	P1 P1	P1 P1	P1 P1	P1 P1	-
)8 CO	DRRIDOR	VS1	RB1	P2	P2	P2	P2	
	AFF RR MALE SHOWER/ SEARCH	VS1 VS1/ RES1	RB1 RB1/B1	EP1 EP1	EP1 EP1	EP1 EP1	EP1 EP1	4
1 MA	ALE SHOWER/ SEARCH	VS1/ RES1	RB1/ B1	EP1	EP1	EP1	EP1	4
3 IT 01 CO	DRRIDOR	SD1 VS1	RB1	P1 P2	P1 P2	P1 P2	P1 P2	
	MATE VISIT	SC1	PB1	P1	P1	P1 P1	P1	
	MATE VISIT	SC1	PB1	P1	P1	P1	P1	
	MALE CHANGING CUBICLES  ALE CHANGING CUBICLES	VS1 VS1	RB1 RB1	P1 P1	P1 P1	P1 P1	P1 P1	
)6 RR	RSTAFF	VS1	RB1	EP1	EP1	EP1	EP1	
	EC. MON. VEND. CORDS/ BOND OFFICE STATION	VS1 CPT2	RB1	P1 P1	P1 P1	P1 P1	P1 P1	
)9 BO	ONDING SUPV.	CPT2	RB1	P1	P1	P1	P1	
	LEASE PROCESSING STATION MATE RR	CPT2 RES1	RB1 B1	P1 EP1	P1 EP1	P1 EP1	P1 EP1	-
	NFETY VEST.	VS1	RB1	P2	P2	P2	P2	
	PEN WAIT SELF REPORTS	VS1	RB1	P1	P1	P1	P1	
	MATE RR AFETY VEST.	RES1 VS1	B1 RB1	EP1	EP1 P2	EP1 P2	EP1 P2	1
7 SA	FETY VEST	VS1	RB1	P2	P2	P2	P2	
	EV. MACHINE ROOM PEN WAITING TRANSFER	VS1 VS1	RB1 RB1	P2	P2	P2	P2	
0 TR/	ANSFER	VS1	RB1	P1	P1	P1	P1	
	ANSFER COORD.	VS1 SC	RB1	P1 P3	P1 P3	P1 P3	 P3	
	OLDING CELL [3] CURE HOLDING CELL ADA [8]	SC		P3	P3	P3	P3	
24 SA	FETY VEST.	CPT1	RB1	P2	P2	P2	P2	
	CURE HOLDING CELL ADA [7] CURE HOLDING CELL [8]	SC SC		P3	P3	P3	P3	
?7 H0	DLDING CELL [3]	SC		P3	P3	P3	P3	
	DLDING CELL [3] DLDING CELL ADA [3]	SC SC		P3	P3	P3	P3	
	DLDING CELL [3]	SC		P3	P3	P3	P3	
31 MA	ALE CHANGING	VS1/ RES1	RB1/ B1	P1	P1	P1	P1	4
32 JA1 33 FEI	N. MALE CHANGING	SC VS1/ RES1	RB1/ B1	P1 P1	P1 P1	P1 P1	P1 P1	4
)2 AT	TY. VISIT	VS1	RB1	P1	P1	P1	P1	
	TY. VISIT EC.	VS1 SC	RB1	P1 P1	P1 P1	P1 P1	P1 P1	
	EU. DRRIDOR	VS1	RB1	P2	P1	P1	P2	

#	NAME	FLOOR	BASE	N	W S	ALL E	W	FINISH NOTES
1406	CORRIDOR	VS1	RB1	P2	P2	P2	P2	1 111011110120
2001 2002	CORR. STORAGE ROOM	VS1 VS1	RB1 RB1	P2 P1	P2 P1	P2 P1	P2 P1	
2003	BREAK ROOM STAFF TOILET	VS1 VS1	RB1	P1 EP1	P1 EP1	P1 EP1	P1 EP1	
2005 2007	CORR.	VS1 VS1	RB1	P2 P1	P2 P2	P2 P2	P2 P2	1
2008	CORR.	VS1	RB1	P1, P2	P1, P2	P1, P2	P1, P2	1
2009 2010	VISIT VISIT	SC SC	PB1 PB1	P1 P1	P1 P1	P1 P1	P1 P1	
2011	VISIT	SC	PB1	P1	P1 P1	P1	P1 P1	
2012 2013	CLUSTER CONTROL STATION MATTRESS STORAGE	CPT2 VS1	RB1 RB1	P1 P1	P1	P1 P1	P1	
2014 2015	MECH.	SC SD1	 RB1	 P1	 P1	  P1	 P1	
2017	IT SAFETY VEST.	SC VS1	 RB1	 P2	 D2	 P2	 P2	
2018 2019	VISIT	VS1	RB1	P1	P2 P1	P1	P1	
2020 2021	VISIT VISIT	VS1 VS1	RB1	P1 P1	P1 P1	P1 P1	P1 P1	
2022 2023	CORR.	VS1	RB1	P2	P2	P2	P2 P2	
2023	CORR. INMATE TRANSFER/CIRCULATION	VS1 VS1	RB1	P2	P2, CR1	P2	P2 P2	
2101 2102	DAYROOM/ DINING/ TV HOUSING OFFICER WK.STATION	SC/ CPT3 CPT3	PB1	P1 P1	P1, VWC1	P1 P1	P1 P1	1, 8
2103	MED. DISTR.	VS1	RB1	P1	P1	P1	P1	
2104 2105	MULTIPURPOSE STAFF RESTROOM	VS2 RES1	RB1 B1	P1 EP1	P1 EP1	P3 EP1	P1 EP1	
2106 2107	ELECT. STO./ RECHARGE MULTIFUNCTIONAL KIOSK	SC VS2	 RB1	P1 P1	P1 P1	P1 P1	P1 P1	
2108	OUTDOOR EXERCISE YARD	SC		BRICK	BRICK	BRICK	BRICK	
2110 2111	STORAGE DORMITORY	SC SC	PB1	P1 P3	P1 P3	P1	P1 P3	
2112 2113	STORAGE DORMITORY	VS1 SC	RB1 PB1	P2 P3	P2 	P2 P3	P2 P3	
2114	SHOWER	RES2	B2	EP1		EP1	EP1	4
2115 2116	INMATE RESTROOM INMATE RESTROOM	RES2	B2 B2	EP1 EP1		EP1	EP1 EP1	
2117 2118	HC DORMITORY DORMITORY	SC SC	PB1 PB1	P3	 P3	P3	P3	
2119	DORMITORY	SC	PB1	P3	P3	P3		
2121 2122	DORMITORY DORMITORY	SC SC	PB1 PB1	P3	P3	P3		
2123 2124	DORMITORY JAN.	SC SC	PB1	P3	P3	P3	 P1	
2125	DORMITORY	SC	PB1	P3	P3	P3		
2201 2202	DAYROOM/ DINING/ TV HOUSING OFFICER WK.STATION	SC/ CPT3 CPT3	PB1 PB1	P1, VWC1	P1 P1	P1 P1	P1 P1	1, 8
2203 2204	MED. DISTR. MULTIPURPOSE	VS1 VS2	RB1	P1 P1	P1 P1	P1 P3	P1 P1	
2205	STAFF RESTROOM	RES1	B1	EP1	EP1	EP1	EP1	
2206 2207	ELECT. STO./ RECHARGE MULTIFUNCTIONAL KIOSK	SC CPT3	RB1	P1 P1	P1 P1	P1 P1	P1 P1	
2208 2209	OUTDOOR EXERCISE YARD DBL. OCC. CELL	SC SC	 PB1	BRICK P3	BRICK P3	BRICK P3	BRICK P3	
2211	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2212 2213	DBL. OCC. CELL DBL. OCC. CELL	SC SC	PB1 PB1	P3	P3	P3	P3	
2214 2215	DBL. OCC. CELL DBL. OCC. CELL	SC SC	PB1 PB1	P3 P3	P3 P3	P3	P3 P3	
2216	HC DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2217 2218	INMATE TOILET SHOWER	RES2	B2 B2		EP1 EP1	EP1 EP1	EP1 EP1	4
2219 2221	JAN. DBL. OCC. CELL	SC SC	 PB1	P1 P3	P1 P3	P1 P3	P1 P3	
2222	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2223 2225	DBL. OCC. CELL DBL. OCC. CELL	SC SC	PB1 PB1	P3	P3	P3	P3	
2226 2227	DBL. OCC. CELL DBL. OCC. CELL	SC SC	PB1 PB1	P3	P3	P3	P3	
2228	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2229 2231	INMATE TOILET STORAGE	RES2	B2	EP1	EP1 P1	EP1 P1	EP1	
2232 2233	DBL. OCC. CELL DBL. OCC. CELL	SC SC	PB1 PB1	P3	P3	P3	P3 P3	
2234	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2235 2301	DBL. OCC. CELL DAYROOM/ DINING/ TV	SC/ CPT3	PB1	P3	P3	P3	P3 P1, VWC1	1, 8
2302 2303	HOUSING OFFICER WK.STATION MED. DISTR.	CPT3 VS1	PB1 RB1	P1 P1	P1 P1	P1 P1	P1 P1	
2304	MULTIPURPOSE ROOM	CPT3	PB1	P1	P1	P1	P3	
2305 2306	STAFF RESTROOM ELECT. STO./ RECHARGE	RES2	B2 	EP1 P1	EP1 P1	EP1 P1	EP1 P1	
2307 2308	MULTIFUNCTIONAL KIOSK OUTDOOR EXERCISE YARD	CPT3 SC	PB1	P1 BRICK	P1 BRICK	P1 BRICK	P1 BRICK	
2309	STORAGE	SC		P1	P1	P1	P1	
2311 2312	DORMITORY DORMITORY	SC SC	PB1	P3	P3	P3	P3	
2313 2314	DORMITORY INMATE TOILET	SC RES2	PB1 B2		P3 EP1	P3 EP1	P3 EP1	
2315	INMATE SHOWER	RES2	B2		EP1	EP1	EP1	4
2316 2317	HC DORMITORY DORMITORY	RES2	B2 PB1		P3	P3	P3	
2318 2319	J.C STORAGE	SC SC	 PB1	P1 P1	P1 P1	P1 P1	P1 P1	
3101	STORAGE	SC		P1	P1	P1	P1	
3102 3103	DORMITORY STORAGE	SC SC	PB1	P3	P3 P1	 P1	P3 P1	
3104 3105	DORMITORY SHOWER/ CHANGING	SC RES2	PB1 B2	P3 EP1		P3 EP1	P3 EP1	4
3106	INMATE RESTROOM	RES2	B2	EP1		EP1	EP1	7
3107 3108	INMATE RESTROOM DORMITORY	RES2 SC	B2 PB1	EP1 P3		EP1 P3	EP1 P3	
3109	DORMITORY	SC	PB1	P3	P3	P3		
3111	DORMITORY DORMITORY	SC SC	PB1 PB1	P3 P3	P3 P3	P3		
3112		SC	PB1	P3	P3	P3		
3112 3113	DORMITORY DORMITORY		PB1	P3	P3	P3		
3112 3113 3114 3115	DORMITORY JAN.	SC SC	PB1	P3 P1	P3 P1	P3	 P1	
3112 3113 3114	DORMITORY	SC						
3112 3113 3114 3115 3116	DORMITORY JAN. DORMITORY	SC SC SC	 PB1	P1 P3	P1 P3	P1 P3	P1	

#	NAME	FL00R	BASE	N	S	Е	W	FINISH NOTES
3206	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3207	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3208	INMATE TOILET	RES2	B2		EP1	EP1	EP1	
3209	INMATE SHOWERS	RES2	B2		EP1	EP1	EP1	4
3211	JAN.	SC		P1	P1	P1	P1	
3213	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3214	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3215	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3217	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3218	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3219	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3221	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3222	INMATE TOILET	RES2	B2	EP1	EP1	EP1	EP1	
3223	STORAGE	SC		P1	P1	P1	P1	
3224	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3225	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3226	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3227	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3301	DORMITORY	SC	PB1	P3	P3	P3	P3	
3302	DORMITORY	SC	PB1	P3	P3	P3	P3	
3303	INMATE TOILET	RES2	B2		EP1	EP1	EP1	
3304	INMATE SHOWER	RES2	B2		EP1	EP1	EP1	4
3305	HC DORMITORY	SC	PB1		P3	P3	P3	
3306	DORMITORY	SC	PB1		P3	P3	P3	
3307	J.C	SC	PB1	P1	P1	P1	P1	
3308	STORAGE	SC	PB1	P1	P1	P1	P1	
EL01	ELEV.	VS1	RB1	PL1	PL1	PL1	PL1	
OS1A	CORRIDOR	VS1	RB1	P2	P2	P2	P2	
OS1B	STAIR			P2	P2	P2	P2	
ST01	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST02	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST03	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST04	STAIR	SC						7
ST05	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST06	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST07	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST07	STAIR	RF1	RB1	P2	P2	P2	P2	7

## **GENERAL NOTES**

- 1. REF. REFLECTED CEILING PLANS FOR EXTENT / LAYOUT OF FINISHES.
- 2. PREPARE ALL EXPOSED STEEL TO SMOOTH FINISH PRIOR TO PAINTING. 3. CONTRACTOR TO PROVIDE TRANSITION STRIPS AT ALL FLOORING MATERIAL CHANGES AS NEEDED.
- 4. ALL COUNTERTOPS TO BE SOLID PHENOLIC AND ALL UPPER AND LOWER CASEWORK TO BE FACED WITH PLASTIC LAMINATE WITH MATCHING EDGEBAND. 5. NOTE: ALL CASEWORK DOORS AND DRAWERS ARE TO BE LOCKABLE WITH HEAVY DUTY LOCKS. ALL LOCKS IN A ROOM KEYED THE SAME, ALL ROOMS KEYED DIFFERENTLY. 6. ALL CASEWORK EXPOSED OUTSIDE CORNERS TO RECEIVE STAINLESS CORNER GUARDS.
- 7. ALL CASEWORK DOORS AND DRAWERS TO ACCEPT BEST CYLINDERS AND SMALL FORMAT KEY CORES. BEST CYLINDERS TO BE OFOI. 8. CHASES TO HAVE UNFINISHED WALLS AND FLOORS.
- 9. PRECAST PANELS EXPOSED TO VIEW TO HAVE POWER TROWELED FINISH WITH PICK PROOF SEALANT AT PANEL JOINTS IN INMATE AREAS. 10. DOOR FRAME NAMING AND NUMBERING TO BE CENTERED ON HEADER FRAME ON LATCH SIDE OF DOOR, HELVETICA MEDIUM FONT, .75" H ON STANDARD FRAMES AND 1" H
- ON DETENTION FRAMES, COLOR WHITE. NUMBERING TO START WITH THE NEW CLUSTER DESIGNATION LETTER "J". 11. DOOR NAMING AND NUMBERING TO BE CENTERED HORIZONTALLY ON LATCH SIDE OF DOOR. NHUMBER/ LETTER HEIGHT AND VERTICAL POSITION TO MATCH EXISTING. 12. LOWER LEVEL HM DOORS, FRAMES AND WINDOW FRAMES TO BE PAINTED **P3**.
- 13. Level 1 HM Doors, Frames and Window Frames to be painted <u>P5</u>. 14. PAINT COLOR ON COLUMNS NOTED TO RECEIVE INTUMESCENT PAINT TO MATCH ADJACENT WALL COLOR.
- 15. ALL CONCRETE BENCHES TO BE FINISHED WITH EPOXY PAINT ALL SIDES.

  16. USE HIGH MOISTURE CONTENT GLUE AT ALL OTHER GLUED DOWN FLOOR SURFACES.

  17. CLASS "A" MIN. WALL AND CEILING FINISHES AT STAIRS AND EXITS. CLASS "C" MIN. ELSEWHER

## FINISH NOTES

- 1. REF. FINISH PLANS FOR EXTENT / LAYOUT OF FINISHES. 2. REF. BUILDING SECTIONS/ INTERIOR ELEVATIONS FOR FURTHER INFORMATION.
- 3. REF. REFLECTED CEILING PLANS FOR EXTENT/LAYOUT OF FINISHES. 4. SHOWER WALLS TO BE GLAZED CMU BLOCK (GCB). SHOWER FLOORS TO BE RESINOUS FLOORING OVER CONCRETE.
- 5. SEE FINISH PLAN FOR EXTENT OF VWC1 ON GYP. BD. SOFFIT THIS ROOM.
- 6. SEE FINISH PLAN AND INTERIOR ELEVATION FOR REQUIRED FLOOR AND WALL MARKINGS. 7. Steel Pipe Handrails, Guard Rails, Stringers, etc. to be painted <u>P3</u>. 8. Steel Pipe Handrails, Guard Rails, Stringers, etc. to be painted <u>P5</u>.

# FINISH LEGEND

- CPT1 WALK-OFF CARPET TILES VESTIBULES
- SHAW, ENTREE TILE, NAVY, 24"X24" CPT2 CARPET TILE (COUNTY STANDARD) TANDUS CENTIVA, AFTERMATH II #03026, 23512 TAPESTRY, **EPOXY PAINT**
- PLAN & ROOM FINISH SCHEDULE CPT3 FLOCKED VINYL SHEET FLOORING FORBO, STRATUS 540014, ECLIPSE

LOWER LEVEL & STAFF AREAS AS DESIGNATED ON FINISH

- LEVEL 1 INMATE AREAS AS DESIGNATED ON FINISH PLAN & ROOM FINISH SCHEDULE PADDED FLOOR
- \*\* ALTERNATE #5 \*\* PF REFER TO SPECIFICATIONS FOR PRODUCT INFORMATION RESINOUS FLOORING
- RES1 RESTROOMS, SHOWERS & DRESSING ROOMS STONHARD, STONCLAD GS/ GS4 WITH TEXTURE 2, STEEL GRAY REFER TO FINISH DETAILS RES2 INMATE RESTROOMS & SHOWERS
- STONHARD, STONCLAD GS/ GS4 WITH TEXTURE 2, STEEL GRAY REFER TO FINISH DETAILS RUBBER FLOORING
- RF1 RUBBER FLOORING STAIR TREADS & LANDINGS NORA, NORAMENT STAIR TREAD ROUND, DUST GRAY SEALED CONCRETE SC REFER TO SPECIFICATIONS FOR FURTHER INFORMATION
- STATIC DISSIPATIVE TILE SD1 STATIC STOP, FREESTYLE ESD PLUS, GRAY-3 GLUE DOWN TILES, 18.5"X18.5"
- TERRAZZO FLOORING \*\* ALTERNATE SHOWER FLOOR FINISH \*\* TZ1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION VINYL SHEET FLOORING

VS1 SHAW, REED SHEET, STROLL, 6.5' X 68'

# CRASH RAILS CR1 ACROVYN SCR-48N, BRUSHED SILVER, 6" HIGH

- REFER TO FINISH DETAILS FOR DOUBLE RAIL INSTALLATION WILSONART, COSMIC STRANDZ EP1 MARINE GRADE EPOXY PAINT - TOILET ROOM WALLS
- COLOR TO BE P2 EP2 MARINE GRADE EPOXY PAINT - SHOWER CEILINGS COLOR TO BE P6 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION
- GLAZED CMU BLOCK GCB SHOWER WALLS REFER TO SPECIFICATIONS FOR PRODUCT INFORMATION WALL BASE PADDED WALLS
- (SHERWIN WILLIAMS IS COUNTY STANDARD BRAND)
  P1 SHERWIN WILLIAMS, PASSIVE SW 7064 SHERWIN WILLIAMS, NETWORK GRAY SW 7073 SHERWIN WILLIAMS, DISTANCE SW 6243 SHERWIN WILLIAMS, TRICORN BLACK SW 6258

PW REFER TO SPECIFICATIONS FOR PRODUCT INFORMATION

SHERWIN WILLIAMS, HOPSACK SW 6109 SHERWIN WILLIAMS, CEILING BRIGHT WHITE SW 7007 TYP. ALL GYP. BD. OR HARD CEILINGS TO RECEIVE PAINT VINYL WALLCOVERING VWC1 MDC WALLCOVERING, LIVING WELL MURALS, ZEN \* FILL GROUT JOINTS TO SMOOTH FINISH BEFORE APPLING

VINYL WALLCOVERING

WALL CARPET WC1 TRI-KES, SILENCE, WARM GRAY \* FILL GROUT JOINTS TO SMOOTH FINISH BEFORE APPLING WALL CARPET

## **CASEWORK** PLASTIC LAMINATE PL1 ALL UPPER AND LOWER CABINETS

- SOLID PHENOLIC (SPC) SP1 ALL COUNTERTOPS AND WALL CAPS DURCON, BRITTANY BLUE \* NOTE \* PROVIDE GROMMETS AT EACH WORKSTATION
- REFER TO SPECIFICATIONS FOR FURTHER INFORMATION COUNTERTOP ABOVE KNEE SPACE AND AS REQUIRED BY OWNER. PROVIDE WIRE MANAGEMENT BELOW COUNTERTOP AT KNEE SPACE. BASIS OF DESIGN: MOCKETT G-SHAPE WIREMOLD CABLE MANAGER.

- B1 TOILET ROOMS, SHOWERS & DRESSING ROOMS COORDINATE TO RES1 (OR TZ1 ALTERNATE FINISH) REFER TO FINISH DETAILS
- B2 INMATE TOILET ROOMS & SHOWERS COORDINATE TO RES2 (OR TZ1 ALTERNATE FINISH) REFER TO FINISH DETAILS
- PAINTED BASE PB1 BOTTOM COURSE OF CMU TO BE PAINTED CONTRASTING COLOR TO WALLS (P3)

RB1 MANNINGTON, BURKE COLLECTION, 204 GRAY

TYPE TP, 4"H COVE BASE FINISH SCHEDULE, NOTES & LEGEND



HISTORY

# DATE DESCRIPTION

1 08/18/2021 ADDENDUM #2

SHEET SHEET C109 FOR GRADING DETAIL

15' UTILITY EASEMENT

TOPOGRAPHIC INFORMATION SHOWN IS BASED ON A

DATED JUNE 29, 2020.

WORK SHALL BE DONE IN ACCORDANCE WITH THE

DATED AUGUST 14, 2020.

FF 626.50

EL 621.

EX FF AT BASEMENT

EX FF AT LOBBY

627.45

RETAINING WALL REFER TO STRUCTURAL PLANS

EXISTING BUILDING

EXISTING

**BENCH MARK LIST** 

BM# 100 SET " X " CUT 598.7 LF WEST AND 294.3 LF SOUTH OF

BM# 101 1/2" SIR W/ TP CAP 526.5 LF WEST AND 54.0 LF NORTH

BM# 102 SET " X " CUT 358.8 LF WEST AND 274.0 LF SOUTH OF

THE EXISTING SHERIFF'S STATION SOUTHWEST BUILDING CORNER.

OF THE EXISTING SHERIFF'S STATION SOUTHWEST BUILDING CORNER.

N: 7141196.58 E: 2538329.23

ELEV=653.08

N: 7141544.87

N: 7141216.91

E: 2538569.12

ELEV=652.18

E: 2538401.43 ELEV=646.47

THE EXISTING SHERIFF'S STATION SOUTHWEST BUILDING CORNER.

RETAINING WALL REFER |-

TO STRUCTURAL PLANS

609.40

EXISTING

BUILDING

EL 608.20 ×

**MATCH LINE - SEE SHEET C106** 

TOP 608.00 ☒

LAYDOWN

BUILDING

CONC. RET. WALL

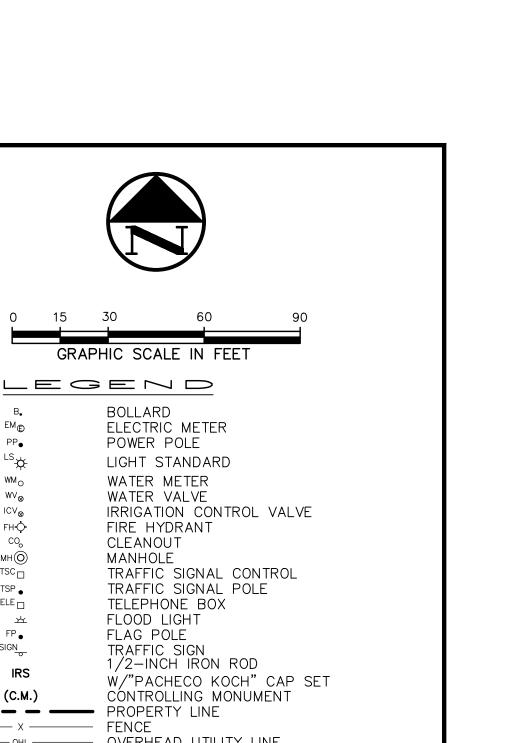
REFER TO SHEET C107 FOR GRADING DETAIL

REFER TO SHEET C107

FOR GRADING DETAIL

FF=608.50

FIRST FLOOR ABOVE BASEMENT FF=626.50



-----OHL OVERHEAD UTILITY LINE EXIST CONTOUR EXIST SPOT ELEVATION EXIST TOP OF CURB ELEVATION EXIST GUTTER ELEVATION PROPOSED CONTOUR EL 614.25 PROPOSED SPOT ELEVATION

PROPOSED TOP OF CURB ELEVATION > PROPOSED GUTTER ELEVATION PROPOSED TOP OF WALL ELEVATION M.G. MATCH EXISTING GRADE

- - - - - - PROPOSED GRADE BREAK PROPOSED DRAINAGE FLOW DIRECTION

## **GRADING & DRAINAGE GENERAL NOTES**

CONTACT:

DIG-TESS

ATMOS ENERGY

ONCOR ELECTRIC

TEXAS ONE CALL

1-800-DIG-TESS

1-800-332-8667

1-800-711-9112

-PROPOSED BACKFILL

WALL NOMENCLATURE

REFER TO STRUCTURAL

-PROPOSED RETAINING WALL

REFER TO STRUCTURAL PLANS

972-888-1359 1-817-589-1056

CHARTER SPECTRUM 1-817-205-8177

48 HOURS PRIOR TO CONSTRUCTION

- 1. REFER TO GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND MOISTURE CONTENT. 2. UNLESS NOTED, ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY WITHIN 3% OF OPTIMUM MOISTURE CONTENT. FILL TO BE PLACED IN MAXIMUM LIFTS OF 6 INCHES. 3. SIDEWALKS AND ACCESSIBLE ROUTES SHALL HAVE A RUNNING SLOPE NO GREATER THAN 5% (UNLESS
- OTHERWISE NOTED) AND A CROSS SLOPE NO GREATER THAN 2%. 4. GRADING OF ALL HANDICAPPED SPACES AND ROUTES TO CONFORM TO FEDERAL, STATE, AND LOCAL
- 5. ALL PROPOSED AND EXISTING GRADES IN NON-PAVED AREAS ARE "FINISHED GRADE" (i.e. IN LANDSCAPE BEDS, TOP OF MULCH/BEDDING MATERIAL). 6. UNLESS NOTED, STORM DRAIN LINES SHALL BE OF THE FOLLOWING MATERIALS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS:
- 6.A. RCP C-76, CLASS III 6.B. ADS N-12 7. UNLESS NOTED, GRATE INLETS TO BE "FORTERRA PIPE AND PRECAST" CATCH BASIN SIZED AS SHOWN, OR APPROVED EQUAL.
- 8. FINAL PAVING, CURB, AND SIDEWALK ELEVATIONS WILL BE PLACED AT PLUS OR MINUS 0.03 FOOT. 9. REFER TO LANDSCAPE SPECIFICATIONS FOR SEEDING AND SODDING REQUIREMENTS.
- 10. ANY CONCRETE, ROCK, OR MATERIAL DEEMED BY THE ENGINEER TO BE UNSUITABLE FOR SUBGRADE SHALL BE DISPOSED OF OFFSITE AT CONTRACTOR'S EXPENSE. 11. TRENCH BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 504.2 AND SHALL BE
- MECHANICALLY COMPACTED IN 6-INCH LIFTS TO THE TOP OF SUBGRADE TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH NCTCOG ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
- 12. EMBEDMENT SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
- 13. A ROUND MANHOLE COVER MEETING CITY SPECIFICATIONS SHALL BE PLACED IN ALL INLET TOPS NEAR THE 14. ALL CONCRETE FOR INLETS AND DRAINAGE STRUCTURES SHALL CONFORM TO NCTCOG ITEM 702.2.4, CLASS
- "A" (3000 PSI) UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN STANDARD CITY SPECIFICATIONS. 15. CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM FOR CRUSHED STONE BEDDING. 16. IF REQUIRED DUE TO CONSTRUCTION, POWER POLES TO BE BRACED OR RELOCATED AT CONTRACTOR'S

CONTRACTOR IS RESPONSIBLE FOR MEETING ALL BONDING REQUIREMENTS FOR WORK IN THE CITY OF MCKINNEY AS WELL AS ALL FEES REQUIRED BY THE CITY FOR CONSTRUCTION OF THE SIDE CIVIL IMPROVEMENTS.

08/16/2021 | ADDENDUM 2 NO. DATE

> TX REG. ENGINEERING FIRM F-469 TX REG. SURVEYING FIRM LS-10008000 **GRADING PLAN**

**COLLIN COUNTY ADF - PHASE 1 ADDITION COLLIN COUNTY JUSTICE CENTER** 

**4300 COMMUNITY AVENUE** CITY OF MCKINNEY, COLLIN COUNTY, TEXAS DATE SCALE NOTES JULY 2021 C105 1"=30" CAB JDH

93845 THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CLINT A. BISSETT, P.E. 93845 ON O7/13/2021. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS

TOPOGRAPHIC SURVEY PREPARED BY: HALFF ASSOCIATES, INC.,

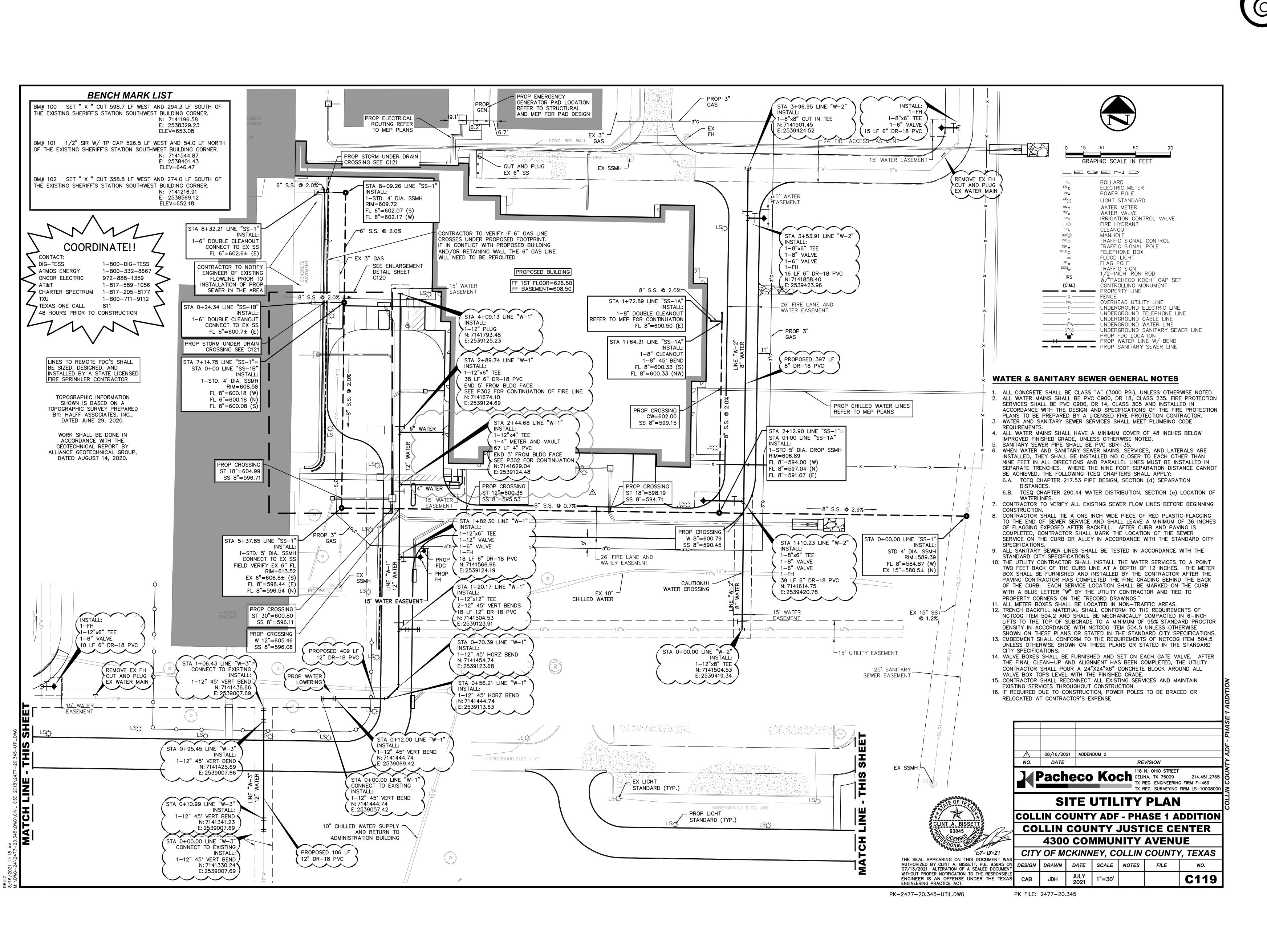
GEOTECHNICAL REPORT BY ALLIANCE GEOTECHNICAL GROUP, ENGINEERING PRACTICE ACT. PK-2477-20.345-GRAD.DWG

PK FILE: 2477-20.345

(97 (21 (21

History # Date Description

GRADING PLAN



History

# | Date | Description

SITE UTILITY PLAN

\_\_\_\_\_\_ I DATE OF THE PROPERTY OF THE 

NOTE: SEE ENLARGED PLANS FOR BALANCE OF TAGS. DETENTION FLOOR PLANS - LEVEL 1 - EAST

ROOM SCHEDULE (LEVEL 1)

STORAGE ROOM

BREAK ROOM

STAFF TOILET

INMATE STAGING

CLUSTER CONTROL STATION

MATTRESS STORAGE

CORR.

CORR.

CORR.

2014 MECH. 2015 IT 2016 BOILER 2017 IT

MEDICAL

CORR.

ROOM NAME

ROOM SCHEDULE (LEVEL 1)

CORR.

 2017
 CORR.

 2018
 SAFETY VEST.

 2019
 VISIT

 2020
 VISIT

 2021
 VISIT

 2022
 CORR.

 2023
 CORR.

 2024
 CORRIDOR

ROOM NAME

INMATE TRANSFER/CIRCULATION

HOUSING OFFICER WK.STATION MED. DISTR.

DAYROOM/ DINING/ TV

MULTIPURPOSE

2106 ELECT. STO./ RECHARGE
2107 MULTIFUNCTIONAL KIOSK
2108 OUTDOOR EXERCISE YARD
2110 STORAGE

STAFF RESTROOM

ROOM SCHEDULE (LEVEL 1)

DORMITORY

STORAGE

DORMITORY

SHOWER

2116 INMATE RESTROOM

DORMITORY

DORMITORY

DORMITORY

DORMITORY

DORMITORY

DORMITORY

2203 MED. DISTR. 2204 MULTIPURPOSE

DAYROOM/ DINING/ TV

HOUSING OFFICER WK.STATION

INMATE RESTROOM

HC DORMITORY

ROOM NAME

ROOM SCHEDULE (LEVEL 1)

MULTIFUNCTIONAL KIOSK

OUTDOOR EXERCISE YARD

STAFF RESTROOM

2206 ELECT. STO./ RECHARGE

2208 OUTDOOR EXERCISE
2209 DBL. OCC. CELL
2211 DBL. OCC. CELL
2212 DBL. OCC. CELL
2213 DBL. OCC. CELL
2214 DBL. OCC. CELL
2215 DBL. OCC. CELL
2215 DBL. OCC. CELL
2216 HC DBL. OCC. CELL
2217 INMATE TOILET
2218 SHOWER

2219 JAN.
2221 DBL. OCC. CELL
2222 DBL. OCC. CELL
2223 DBL. OCC. CELL
2224 SAFETY VESTIBULE

ROOM NAME

ROOM SCHEDULE (LEVEL 1)

DBL. OCC. CELL

2226 DBL. OCC. CELL
2227 DBL. OCC. CELL
2228 DBL. OCC. CELL
2229 INMATE TOILET

STORAGE

DBL. OCC. CELL

DBL. OCC. CELL

2234 DBL. OCC. CELL

2235 DBL. OCC. CELL

1 DAYROOM/ DINING/ TV

HOUSING OFFICER

MED. DISTR.

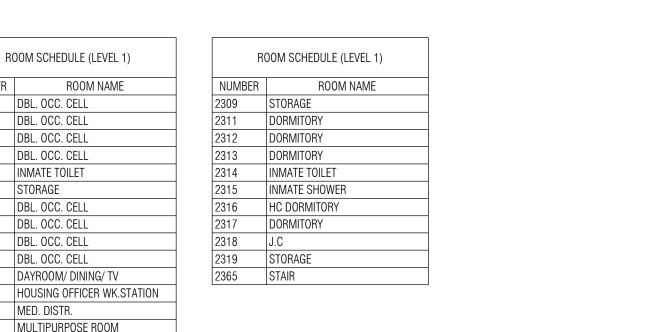
2304 MULTIPURPOSE ROOM

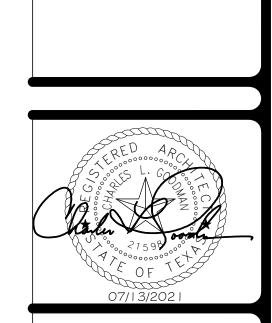
2306 ELECT. STO./ RECHARGE
2307 MULTIFUNCTIONAL KIOSK
2308 OUTDOOR EXERCISE YARD

2305 STAFF RESTROOM

ROOM NAME

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# DATE DESCRIPTION
1 08/18/2021 ADDENDUM #2

DETENTION FLOOR PLAN - LEVEL 1 EAST

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DHM DOOR SCHEDULE

F3000 7' - 4" 3' - 4" DHM

F1000 7' - 4" 3' - 4" DHM

F3000 7' - 4" 6' - 0" DHM

DPT 4' - 0" 2' - 6" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 8' - 0" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 4" DHM F3000 7' - 4" 3' - 4" DHM F3000 7' - 4" 3' - 10" DHM F3000 7' - 4" 3' - 4" DHM

F3000 7' - 4" 3' - 4" DHM F3000 7' - 4" 3' - 4" DHM F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 4" DHM

F1000 7' - 4" 3' - 4" DHM

F3000 7' - 4" 3' - 10" DHM F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

CONSTRUCTION

DOOR TYPE HEIGHT WIDTH DOOR MATERIAL GLAZING TYPE TYPE

7' - 0" 2' - 6" DHM 7' - 0" 2' - 6" DHM

7' - 0" 2' - 6" DHM 7' - 0" 2' - 6" DHM

7' - 0" 3' - 0" DHM

3' - 8 1/2" 2' - 2" DHM

7' - 0" 2' - 6" DHM 7' - 0" 2' - 6" DHM

7' - 0" | 2' - 6" | DHM

7' - 0" | 2' - 6" | DHM

7' - 0" 2' - 6" DHM 7' - 0" 2' - 6" DHM 7' - 0" 3' - 0" DHM 7' - 0" 2' - 6" DHM

7' - 0" 2' - 6" DHM

7' - 0" | 2' - 6" | DHM

7' - 0" 3' - 0" DHM

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7' - 0" 2' - 6" DHM

7' - 0" 2' - 6" DHM

7' - 0" 2' - 6" DHM

7' - 0" 3' - 0" DHM 7' - 0" 3' - 0" DHM

REMARKS

REF: 10/D722 & 11/D722

REF: 10/D722 & 11/D722

REF: 10/D722 SIM & 12/D722

REF: 10/D722 SIM & 12/D722

D-05 D-05 D-05 D-08 D-08 D-01

D-05

D-06

D-06

D-14

D-05 D-06 D-06 D-01

D2225 BX-X-S

D2226 BX-X-S D2227 BX-X-S

D2228 BX-X-S

D2233 BX-X-S

D2234 BX-X-S

D2235 BX-X-S

D2301 HX-P D2303B AX

D2304B AX

D2308A | AX

D2308B | AX

D3201 BX-X-S

D3202 BX-X-S D3203 BX-X-S

D3204 BX-X-S

D3207 BX-X-S

D3213 BX-X-S

D3214 BX-X-S

D3215 BX-X-S

D3218 BX-X-S

D3219 BX-X-S

D3221 BX-X-S

D3224 BX-X-S

D3226 BX-X-S

D3227 BHCX-X-S DST01A AX

OSTO1B AX

DST02B AX

DST03A AX

DST03B AX

DST05B AX

DST06A BX

CONSTRUCTION

'E TYPE HEIGHT WIDTH FRAME MATERIAL GLAZING TYPE RATING HW SET NO.

F3000 7' - 4" 3' - 4" DHM -- D-01

FIRE

D-06 D-06 D-01

REMARKS

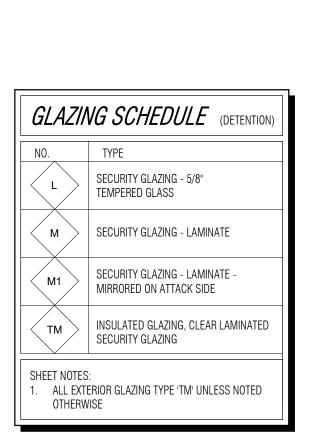
REF: 10/D722 SIM & 12/D722



-99 -27 -90

 $0.4 \pm 0.6$ 

# DATE DESCRIPTION
1 08/18/2021 ADDENDUM #2



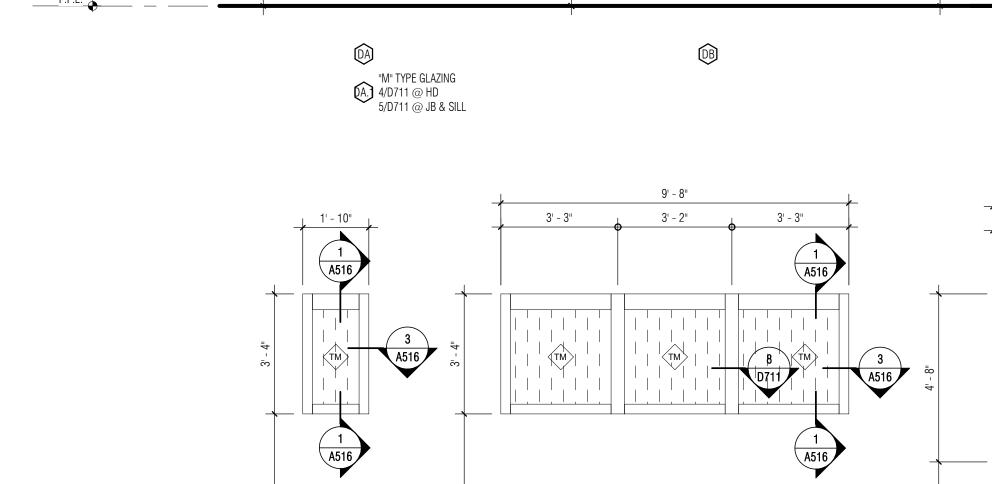
GLAZII	VG SCHEDULE (DETENTION)
NO.	ТҮРЕ
L	SECURITY GLAZING - 5/8" TEMPERED GLASS
M	SECURITY GLAZING - LAMINATE
M1	SECURITY GLAZING - LAMINATE - MIRRORED ON ATTACK SIDE
TM	INSULATED GLAZING, CLEAR LAMINATED SECURITY GLAZING
SHEET NOTES	: ERIOR GLAZING TYPE 'TM' UNLESS NOTED



WIGINTON

DETENTION DOOR SCHEDULE & DHM FRAME ELEVATIONS

16' - 0" DE. REF: 8/D722 @SILL "M" TYPE GLAZING 4/D711 @ HD 5/D711 @ JB & SILL (C.) REF: 8/D722@SILL DE.1 REF: 17/D711@SILL OC. 1 "M1" TYPE GLAZING DE.3 REF: 1/D722 DETENTION HOLLOW METAL FRAME TYPES



DHM DOOR SCHEDULE

TYPE HEIGHT WIDTH FRAME MATERIAL GLAZING TYPE RATING HW SET NO.

REMARKS

D1322 | CX-X

D1327 CX-X

D1328 CX-X

D1333B | AX

D2005A HX

D2005B AX

D2007A HX

D2007B AX

D2203B AX

D2204B HX

2208A CX

D2209 BX-X-S

D2211 BX-X-S

D2212 BX-X-S

D2213 BX-X-S

D2222 BX-X-S

D2223 BX-X-S

BX-X-S

7' - 0" 3' - 0" DHM

7' - 0" | 3' - 0" | DHM

7' - 0" 3' - 0" DHM 7' - 0" 3' - 0" DHM

7' - 0" 3' - 0" DHM
7' - 0" 3' - 0" DHM
3' - 8 1/2" 2' - 2" DHM

7' - 0" 3' - 0" DHM

| 7' - 8" | 3' - 0" | DHM

| 7' - 0" | 3' - 0" | DHM

7' - 0" 3' - 0" DHM

3' - 8 1/2" 2' - 2" DHM 7' - 0" 3' - 0" DHM

| 7' - 0" | 2' - 6" | DHM

7' - 0" | 2' - 6" | DHM

7' - 0" 2' - 6" DHM

7' - 0" 2' - 6" DHM

7' - 0" 2' - 6" DHM 7' - 0" 3' - 0" DHM

D-06

D-06
D-06
D-09
D-09
D-05
D-01
D-01

D-01 D-03 D-01 D-05 D-06 D-01

D-05 D-05

D-05

D-14

D-09

D-14

D-14

D-05
D-05
D-05
D-05
D-05
D-05
D-05
D-06
D-09
SLIDING DOOR

D-14

REF: 10/D722 & 11/D722

L. MESH

TL. MESH

L. MESH

L. MESH

L. MESH

L. MESH

TYPE HEIGHT WIDTH FRAME
F3000 7' - 4" 3' - 10" DHM
F3000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 6' - 0" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 6' - 0" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 6' - 0" DHM
F8000 7' - 4" 10' - 2" DHM

F3004 7' - 4" 10' - 2" DHM
F3003 7' - 4" 6' - 0" DHM
F3000 7' - 4" 3' - 10" DHM
F3000 7' - 4" 3' - 10" DHM
F3000 7' - 4" 3' - 10" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 4' - 11" DHM
DPT 4' - 0" 2' - 6" DHM
DPT 4' - 0" 2' - 6" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 4' - 11" DHM
DPT 4' - 0" 2' - 6" DHM
DPT 4' - 0" 2' - 6" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 4' - 11" DHM
F8000 7' - 4" 3' - 10" DHM
DPT 4' - 0" 2' - 6" DHM
F1000 7' - 4" 3' - 4" DHM
F1000 7' - 4" 3' - 4" DHM
DPT 4' - 0" 2' - 6" DHM
DPT 4' - 0" 2' - 6" DHM

F3000 7' - 4" 4' - 4" DHM F3000 7' - 4" 4' - 10" DHM

F8000 7' - 4" 4' - 11" DHM

CONSTRUCTION

7' - 0" 3' - 0" DHM

7' - 0" 3' - 0" DHM

7' - 0" 4' - 0" DHM

7' - 0" 4' - 0" DHM

7' - 0" 3' - 0" DHM 7' - 0" 3' - 0" DHM

7' - 0" 3' - 0" DHM

7' - 0" | 3' - 0" | DHM

7' - 0" 3' - 0" DHM 7' - 0" 3' - 0" DHM 7' - 0" 3' - 0" DHM 7' - 0" 3' - 0" DHM

7' - 0" 3' - 0" DHM 7' - 0" 3' - 0" DHM

7' - 0" 3' - 0" DHM

7' - 0" 3' - 0" DHM

7' - 0" 4' - 0" DHM

7' - 0" 4' - 0" DHM

7' - 0" 4' - 0" DHM

3' - 8 1/2" 2' - 2" DHM

3' - 8 1/2" 2' - 2" DHM

| 7' - 0" | 4' - 0" | DHM

7' - 0" 3' - 0" DHM

3' - 8 1/2" | 2' - 2" | DHM

3' - 8 1/2" | 2' - 2" | DHM

7' - 0" 3' - 0" DHM

7' - 0" 3' - 6" DHM

7' - 0" 4' - 0" DHM

7' - 0" 4' - 0" DHM

D1003A HX-P

D1003B HX

D1007 CX-X D1008 CX-X

D1009 CX-X

D1101A BHCX

D1101B AX

D1118 CX-X

D1126 CX-X

D1129A HX

D1129B CX

D1130A AX

D1130B AX

D1141A HX D1141B HX

D1200A AX

D1204A AX

D1204B AX

D1208B HX

D1209 AX

D1303 BX-S

D1304 AX

D1305 AX

D1313A BHCX

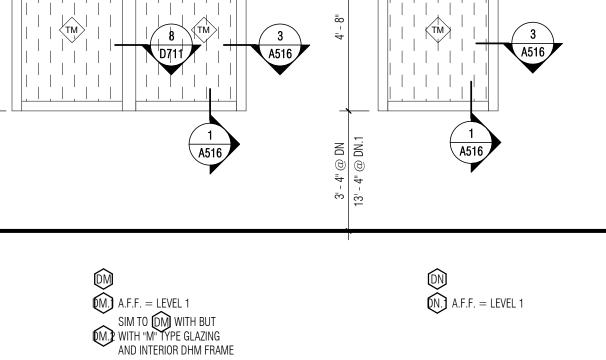
D1313B | AX

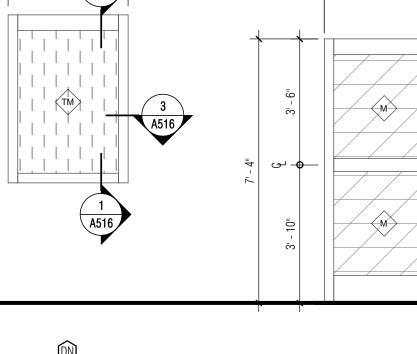
D1316A AX D1316B BHCX

D1317A BHCX

D1317B AX

D1006 AX





DHM DOOR SCHEDULE

F3000 7' - 4" 4' - 4" DHM
F3000 7' - 4" 3' - 10" DHM
F1000 7' - 4" 3' - 4" DHM
F1000 7' - 4" 3' - 4" DHM
F3003 7' - 4" 6' - 0" DHM
DPT 4' - 0" 2' - 6" DHM
F3003 7' - 4" 6' - 10" DHM
F3000 8' - 0" 3' - 10" DHM
F3000 7' - 4" 3' - 10" DHM
DPT 4' - 0" 2' - 6" DHM
F3000 7' - 4" 6' - 0" DHM
F3000 7' - 4" 6' - 0" DHM
F3000 7' - 4" 6' - 10" DHM
F3000 7' - 4" 6' - 10" DHM
F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 4" DHM

F3000 7' - 4" 3' - 10" DHM

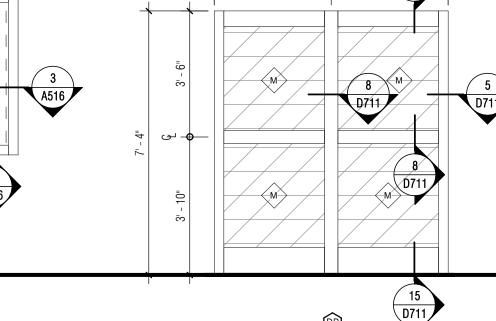
F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 10" DHM

F3000 7' - 4" 3' - 4" DHM F3000 7' - 4" 3' - 4" DHM

F3000 7' - 4" 3' - 10" DHM

CONSTRUCTION



P. "M1" TYPE GLAZING

N. A.F.F. = LEVEL 1

DESCRIPTION

PANELBOARD SCHEDULE PANEL NAME: **LA** (ELEC ROOM 1404) VOLTAGE: 208 /120V 3PH, 4W LOAD (KVA)

MISC KITC HEAT MTR RCPT LTG

9 B 10

11 C 12

13 A 14

15 B 16

17 C 18

19 A 20

21 B 22

23 | C | 24

25 A 26

27 B 28

31 A 32

33 B 34

35 C 36

37 A 38

39 B 40

43 A 44

45 B 46

49 A 50

55 A 56

57 B 58

59 C 60

61 A 62

63 B 64

65 C 66

67 A 68

69 B 70

73 A 74

75 B 76

77 C 78

79 A 80

81 B 82

83 | C | 84 '

0.72 0.50

AMP/ POLE 1 A 2 3 B 4 5 C 6 0.72 7 A 8

0.20

0.20

8.30

7.60

2.16

0.00 | 0.00 | 0.00 | 3.30 | 30.73 | 0.00

20/1 RCPT RECORDS/BOND 20/1 RCPT RECORDS/BOND 20/1 RCPT RECORDS/BOND 1.00 20/1 RCPT RECORDS/BOND 1.08 1.00 0.72 20/1 RCPT JAN, R/R, CONV 20/1 RCPT JAN, CHASE 0.54 0.75 20/1 RCPT TRANS/COORD.. 0.72

20/1 RCPT RELEASE/PROCES 20/1 RCPT RECORDS/BOND 20/1 PWR FLR BOX ARREST. 20/1 RCPT PRINT 1014 0.72 1.08 0.90 20/1 RCPT DESKS/CONV

20/1 | RCPT INTOX/CHASE/VEST | 24 0.72 20/1 RCPT CONVENIENCE 0.75 20/1 | CONV CONTROL PANEL PROPERTY CONVEYOR

20/3 SYSTEM

0.45 0.45 0.45 0.45 PROPERTY CONVEYOR

0.45 20/3 SYSTEM

0.45 (1HP) 0.20

VRF-04/01 & VRF-04/02 15/2 & VRF-04/03 0.75 15/1 RCPT BOILER CNTRL PNL 15/1 RCPT LOUVER L-25

BLANK

BLANK

BLANK

BLANK

BLANK

BLANK

BLANK

BLANK

60/3

KVA 0.00 0.00 0.00 0.00 LIGHTING RECEPTACLE 0.00 | 0.00 | 0.00 0.00 MOTOR 1.40 0.75 0.00 2.15 NEC 2.69 LARGEST MOTOR FLC #N/A KVA #N/A

POLE

BUS SIZE:

1 RCPT GARBGE DISP 1113 20/1 120
3 RCPT WATER SOFT WS-1 20/1 0.75
5 BLANK/FUTURE

KAIC RATING:

DESCRIPTION

7 BLANK/FUTURE

9 BLANK/FUTURE

11 BLANK/FUTURE

13 BLANK/FUTURE

15 BLANK/FUTURE

17 | BLANK/FUTURE

19 BLANK/FUTURE

21 BLANK/FUTURE

23 BLANK/FUTURE

25 BLANK/FUTURE

27 BLANK/FUTURE

29 BLANK/FUTURE

31 BLANK/FUTURE

33 BLANK/FUTURE

35 BLANK/FUTURE

37 BLANK/FUTURE

39 BLANK/FUTURE

41 BLANK/FUTURE

MB SIZE: MLO

POLE | LTG | RCPT | MTR | HEAT | KITC | MISC

MOUNTING: SURFACE

LOAD (KVA)

0.00 | 0.00 | 1.95 | 0.00 | 0.00 | 0.00

MB SIZE: **225 A** 

MOUNTING: SURFACE

LOAD (KVA)

MTR HEAT KITC MISC

0.00 0.00 KITCHEN 0.00 0.00 0.00 0.65 MISCELLANEOUS 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 TOTAL 1.40 0.75 0.00 2.15 2.69 **TOTAL KVA** 

LTG RCPT

0.90

0.36

0.75

0.36

0.54

0.72

0.75

1.08

1.00

1.08

1.00

1.08

1.00

0.54

0.54

0.54

0.54

0.72

1.00

0.72

1.00

1.00

0.36

0.90

1.20

0.54

1.00

1.00

0.30

0.30

0.30

0.20

0.20

1.50

6.80

6.10

2.16

0.00 | 44.42 | 0.00 | 0.00 | 0.00 | 0.00

PANELBOARD SCHEDULE

7 A 8

9 B 10

11 C 12

13 A 14

15 B 16

17 C 18

19 A 20

21 B 22

23 C 24

25 A 26

31 A 32

33 B 34

37 A 38

39 B 40

41 C 42

PANELBOARD SCHEDULE

1 | A | :

3 B 4

5 C 6

7 A 8

9 B 10

11 C 12

13 A 14

15 B 16

| 17 | C | 18

19 A 20

21 B 22

25 A 26

27 B 28

29 C 30

31 A 32

33 B 34

35 C 36

37 A 38

39 B 40

43 | A | 44 |

51 B 52

55 A 56

57 B 58

59 C 60

61 A 62

63 B 64

65 C 66

67 A 68

69 B 70

71 C 72

73 A 74

75 B 76

79 A 80

81 B 82

83 C 84

**VOLTAGE:** 

VOLTAGE:

PANEL NAME: **L1B** (ELEC ROOM 1026)

LOAD (KVA)

0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00

LC (MECH ROOM 2014)

208 /120V 3PH, 4W

0.90

1.00

1.20

1.20

0.72

1.00

0.72

0.75

0.75

1.00

1.00

1.00

1.00

1.00

1.00

0.54

0.90

0.75

0.75

0.75

0.75

0.75

0.75

0.75

0.75

1.00

0.75

10.50

9.75

11.25

0.94

0.94

1.20

1.20

LOAD (KVA)

MISC | KITC | HEAT | MTR | RCPT

208 /120V 3PH, 4W

MISC KITC HEAT MTR RCPT LTG POLE DESCRIPTION ON 1

0.20 151 UNIT HEATER UH-06 2

BLANK/FUTURE 4

DESCRIPTION

10

12

14

18

BLANK/FUTURE

**BLANK/FUTURE** 

BLANK/FUTURE

BLANK/FUTURE

BLANK/FUTURE

BLANK/FUTURE

BLANK/FUTURE

**BLANK/FUTURE** 

BLANK/FUTURE

**TOTALS** 

DESCRIPTION

20/1 RCPT CONV CORRIDORS

20/1 RCPT VIDEO VISIT 2010/11

20/1 RCPT MWAVE BREAK RM

20/1 RCPT MEDICAL

20/1 RCPT CONVENIENCE

20/1 RCPT MEDICAL 2303

20/1 RCPT 2307 KIOSK

20/1 RCPT 2307 KIOSK

20/1 RCPT 2207 KIOSK

20/1 RCPT 2207 KIOSK

20/1 RCPT 2107 KIOSK

20/1 RCPT 2107 KIOSK

BLANK

BLANK

20/1 RCPT VESDA PANEL

DUAL FEED

125/3 30KVA

20/1 RCPT HOUSING ST 2302

20/1 J-BOX A-C PNL RM 2015

20/1 J-BOX A-C PNL RM 2015 42

20/1 J-BOX SEC ELEC RM 2015 44

20/1 J-BOX SEC ELEC RM 2015 46

20/1 J-BOX SEC ELEC RM 2015 48

20/1 J-BOX SEC ELEC RM 2015 **50** 

20/1 J-BOX SEC ELEC RM 2015 **52** 

20/1 J-BOX SEC ELEC RM 2015 **54** 

20/1 | RCPT MECH EMS CABINET | 64

VRF-01/01 &01/02 & 01/08 66

VRF-02/01 & 02/02 & 02/04 **70** 

UPS (PANEL SE) RM 2015 74

UPS (PANEL SE) RM 2015 | **80** 

(SECURITY ELECTRONICS) 84

& 01/09 & FS-01/01 & 01/03 **68** 

20/1 RCPT CONV RM 2015

20/1 RCPT COFFEE BREAK RM

20/1 RCPT CHARGING STATION 12

20/1 RCPT CLUSTER CONTROL 18

20/1 RCPT CLUSTER CONTROL 20

20/1 RCPT CONVENIENCE TIER 26

POLE

BLANK	68		TOTAL AMPS	
BLANK	70		TOTAL AIVIFS	
BLANK	72			
BLANK	74			
BLANK	76			
BLANK	78		BUS SIZE:	225
PANEL IT1	80		KAIC RATING:	10
(I.T. ROOM 1213)	82	СКТ	DESCRIPTION	AMP/

1 RCPT CONN CORRIDOR

3 RCPT CONV. R-ROOM

7 RCPT CONV BREAK RM

9 RCPT REFR BREAK RM

15 RCPT VISIT DEVICES

11 RCPT R-RM, AUTO FLUSH 20/1

13 RCPT CHARGING STATION 20/1

17 RCPT CONVENIENCE 20/1

19 RCPT CLUSTER CONTROL 20/1

**21** RCPT DAY RM 2201 (R2-33) 20/1

**23** RCPT TV 2201 (R2-34) 20/1

**25** RCPT DAY RM 2301 (R2-35) 20/1

**27** | RCPT TV 2301 (R2-36) | 20/1

29 RCPT DAY RM 2101 (R2-31) 20/1

**31** RCPT TV 2101 (R2-32) 20/1

**33** | RCPT M/PURP 2304 (R2-39) | 20/1

35 | RCPT M/PURP 2204 (R2-38) | 20/1

**37** RCPT M/PURP 2104 (R2-37) 20/1

**39** RCPT HOUSING ST 2202 20/1

43 RCPT CHARGING STATION 20/1

45 RCPT CHARGING STATION 20/1

49 RCPT CHARGING STATION 20/1

51 RCPT CHARGING STATION 20/1

53 RCPT HOUSING ST 2102 20/1

55 RCPT CONVENIENCE LV... 20/1

**57** RCPT CON 2014 MECH L... 20/1

61 RCPT CONVENIENCE LV... 20/1

63 RCPT BOILERS 1 & 2 20/1

67 RCPT M/D & HYDR VALVE | 15/1

69 RCPT M/D & HYDR VALVE | 15/1

71 RCPT M/D & HYDR VALVE | 15/1

73 RCPT HYDR VALVE/ACTU 15/1

75 RCPT HYDR VALVE/ACTU | 15/1

77 PWR CUT OFF (RELAY) 20/1

20/1

60/3

41 RCPT MEDICAL 2203

47 RCPT MEDICAL 2103

**59** RCPT TMV-1 & RP-1

65 RCPT BOILERS 3 & 4

**79** PANEL IT2

**81** (I.T. ROOM 2014)

5 SPARE

**TOTALS** 1. PROVIDE A TYPED BREAKER SCHEDULE ON THE INSIDE OF THE DOOR

PWR GATE OPERATOR

20/1 | RCPT MECH EMS CABINET | 76

**TOTALS** 

EAST SIDE (2HP)

20/1 PWR GATE CONTROL

25/1 FAN EF-03

HP: 1 FLC 4.60 V/PH: 208/3 KVA 1.66 2.00 2.00 0.00 4.00 1.00 4.00 0.00 0.00 0.00 0.00 0.65 0.00

BUS SIZE:

KAIC RATING:

DESCRIPTION

9 | RCPT VIDEO VISIT 1302/03 | 20/1

17 RCPT TRSN COORD, VEST 20/1

1 RCPT CORRIDOR

3 RCPT RECORDS/BOND

5 RCPT RECORDS/BOND

7 RCPT RECORDS/BOND

13 RCPT CORR, ELEC MON

19 PWR FLR BOX ARREST...

21 RCPT R-R/PRINT/VEST

23 RCPT STOR/COUNTER

27 RCPT CONVENIENCE

29 CONV CONTROL PANEL

31 PROPERTY CONVEYOR

37 CONV CONTROL PANEL

39 RCPT CORRIDOR CONV

41 RCPT WASHER LAUND...

**45** (2 #10 + N + G)

53 RCPT EXTERIOR

61 RCPT ELEV CAB

**63** FAN EF-01

67 FAN EF-15

**71** FAN EF-16

79 BLANK

81 BLANK

83 BLANK

73 RCPT ROOF

77 (2 #8 + N + G)

LIGHTING

KITCHEN

RECEPTACLE

LARGEST MOTOR

**69** VRF-01/03 TO VRF-01/07

**71** & FS-01/02

**81** 5HP

**83** #10 WIRE

73 RCPT EXTERIOR

75 PWR BI-FOLD DOOR

77 PWR BI-FOLD DOOR...

79 PWR COMPRESSOR

**TOTAL AMPS** 

75 GENERATOR ELEC. PNL

**TOTALS** 

55 RCPT ELEV OIL INT.

43 RCPT DRYER LAUND 1207

47 RCPT SMOKE CURTAIN

49 J-BOX SEC ELEC DEVICE

51 J-BOX SEC ELEC DEVICE

**57** RCPT ELEV SP-1 (1/2HP) 20/1

59 RCPT ELEV CONTROLLER | 20/1

33 SYSTEM

35 (1HP)

25 RCPT PROP COLLT 1204

11 RCPT RELEASE, R-R/...

15 RCPT REL/STAGE..

225 A

20/1

20/1

20/1

20/1

15/1

25/2

25/2

LOAD (KVA)

A B C KVA

MB SIZE: **225 A** 

POLE LTG RCPT MTR HEAT KITC MISC

0.54

0.50

1.00

1.00

0.54

0.72

1.00

0.90

1.08

0.72

0.54

0.36

0.72

0.75

0.75

0.54

1.00

1.00

0.36

0.50

0.50

0.50

0.45

0.45

0.45

0.70

1.15

1.37

1.37

1.37

1.37

1.90

6.00

6.00

CONN.

0.00 | 0.00 | 0.00 | 0.00 | 1.25 | 0.00

4.90 | 11.44 | 11.32 | 27.66 | NEC | 27.66

19.69 | 16.68 | 11.80 | 48.17 | NEC

0.00 | 17.44 | 24.36 | 4.00 | 0.00 | 0.00

0.70 2.00

2.00

MOUNTING: SURFACE

LOAD (KVA)

MISCELLANEOUS	0.00	0.00	0.00	0.00	1.00	0.00													
TOTAL	26.59	30.12	23.12	79.83		60.75	7												
TOTAL KVA	•	'	'	'	'	60.7	•												
TOTAL AMPS						168.6													
									_										
						Р	ANELE	ВОА	RD	SCI	HEDUL	E							
BUS SIZE:	225	Α	MB S	ZE:	225 A						PANEL	NAME:	LB	(ELEC F	ROOM 102	26)			
KAIC RATING:	10		MOUNT	ING:	SURFA	CE					VOLTA	GE:	208	/120V	3PH, 4V	V			
DECODIDATION	AMP/			LOA	O (KVA)			]					LOAD	(KVA)			AMP/	DECODIDATION	$\Box$
DESCRIPTION	POLE	LTG	RCPT	MTR	HEAT	KITC	MISC	1			MISC	KITC	HEAT	MTR	RCPT	LTG	POLE	DESCRIPTION	'
RCPT FIRE ROOM	20/1		0.75					1	Α	2					0.75		20/1	RCPT FIRE ROOM	
RCPT FIRE ROOM, WS-1	20/1		1.00					3	В	4					0.36		20/1	RCPT VSP CONVENIENCE	
RCPT VSP CONVENIENCE	20/1		0.36					5	С	6					0.36		20/1	RCPT VSP CONVENIENCE	
RCPT VSP CONVENIENCE	20/1		0.72					7	Α	8					0.54		20/1	RCPT BREAK CONV	
RCPT JAN, MECH, VEST	20/1		1.08					9	В	10					1.00		20/1	RCPT BREAK COFFEE	
RCPT EXT, CHASE	20/1		0.90					11	С	12					0.75		20/1	RCPT BREAK REFR	
RCPT R/R, CONV	20/1		0.90					13	Α	14					1.20		20/1	RCPT BREAK MICROWAVE	: -
PWR FLOOR BOX	20/1		0.72					15	В	16					1.00		20/1	WHIP - MILLWORK	
RCPT BOOKING COORDIN	20/1		0.54					17	С	18					0.75		20/1	PWR FLOOR BOX	
	1		1	t	1	1	1	_	1	1	1	1	1		1	1		+	-

RCPT BREAK COFFEE RCPT BREAK REFR RCPT BREAK MICROWAVE 14 WHIP - MILLWORK PWR FLOOR BOX 19 WHIP - MILLWORK 20/1 1.00 19 A 20 1.00 20/1 PWR HYDR GATE. 21 B 22 21 WHIP - MILLWORK 20/1 1.00 1.00 20/1 PWR HYDR GATE.. 23 RCPT CONVENIENCE 0.72 0.50 15/1 RCPT CO SENSORS 20/1 23 C 24 25 RCPT PRINTER 20/1 RCPT PRINT/COPY 20/1 1.00 25 A 26 0.72 27 RCPT OFFICE 27 B 28 20/1 RCPT ADMISSIONS 20/1 0.90 0.90 29 RCPT BOOKING RELEASE | 20/1 0.72 29 C 30 0.36 20/1 RCPT PRE-BOOK CNTR 31 RCPT PRE-BOOK CNTR 20/1 0.50 31 A 32 0.72 20/1 RCPT PRE-BOOK CNTR 32 33 RCPT PRE-BOOK CNTR 20/1 0.50 33 B 34 20/1 RCPT PRE-BOOK CNTR 0.36 0.72 35 RCPT HEALTH SCREEN 20/1 35 C 36 0.72 20/1 RCPT HEALTH SCREEN 36 37 RCPT HEALTH SCREEN 20/1 0.72 0.72 20/1 RCPT HEALTH SCREEN 37 A 38 39 RCPT CONVENIENCE 0.72 39 B 40 1.20 20/1 RCPT BODY SCANNER 41 RCPT BODY SCANNER 1.20 41 C 42 20/1 RCPT HEALTH EXAM 0.72 43 RCPT HEALTH SCR, CONV 20/1 0.72 0.54 20/1 RCPT MENTAL HEALTH... 44 | 43 | A | 44 45 RCPT MED STRG, CONV 20/1 0.54 45 B 46 0.72 20/1 PWR FLOOR BOX 47 PWR FLOOR BOX 0.72 47 C 48 0.75 20/1 RCPT KIOSK 49 RCPT VIDEO VISIT.. 0.60 49 A 50 0.90 20/1 | RCPT TV (RELAY R1-22) 0.90 **51** RCPT TV (RELAY R1-23) 0.72 20/1 RCPT INTERVIEW 53 RCPT INTERVIEW, CONV 20/1 PWR FLR BOX, COURT RM 54 0.90 55 A 56 20/1 RCPT CONVENIENCE 55 RCPT TV, CONV COUTH 0.75 0.36 57 B 58 57 RCPT CONVENIENCE 0.54 15/1 FANS EF-02 0.70 15/1 UNIT HEAT UH-02 TO... 59 RCPT FINGER PRINT.. 0.72 0.75 61 RCPT LOUVERS VSP 0.50 61 A 62 2.00 BOOSTER PUMP 30/3 BP-1 63 RCPT EXTER IRRIG CNTRL 15/1 63 B 64 0.50 2.00 65 VRF-02/03 & VRF-02/05 0.15 65 C 66 2.00

67 A 68

69 B 70

71 C 72

73 A 74

75 B 76

77 | C | 78 |

TOTALS	<u> </u>	0.00	26.28	8.50	0.00	0.00	0.00
LOAD	L	OAD (KV	A)	CONN.		DESN	
LOAD	А	В	С	KVA	MULT	KVA	
LIGHTING	0.00	0.00	0.00	0.00	1.25	0.00	
RECEPTACLE	16.33	17.16	15.31	48.80	NEC	29.40	
MOTOR	7.25	7.20	5.25	19.70	NEC	19.70	
LARGEST MOTOR	HP:	5	FLC	16.70	•	8.00	
	V/PH:	208/3	KVA	6.02		9.00	
HEAT	0.00	0.00	0.00	0.00	1.00	0.00	
KITCHEN	0.00	0.00	0.00	0.00	0.65	0.00	
MISCELLANEOUS	0.00	0.00	0.00	0.00	1.00	0.00	
TOTAL	23.58	24.36	20.56	68.50		49.10	
TOTAL KVA						49.1	•

20/1

20/1

0.15

1.10

1.10

2.00

136.3

0.72

0.75

0.75

| 79 | A | 80 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00

83 C 84 0.00 0.00 0.00 0.00 0.00 0.00

81 B 82 0.00 0.00 0.00 0.00 0.00 0.00 100/3

0.00 | 0.00 | 0.00 | 11.20 | 22.52 | 0.00

1. PROVIDE HACR BREAKERS FOR ALL HVAC EQUIPMENT 2. PROVIDE A TYPED BREAKER SCHEDULE ON THE INSIDE OF THE DOOR

0.50

0.75

1.40

1.40

1.70

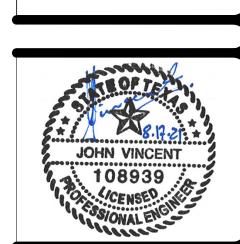
LIGHTING 0.00 | 0.00 | 0.00 | 0.00 | 1.25 | 0.00 RECEPTACLE 35.92 34.04 30.83 100.79 NEC 55.40 0.94 | 1.20 | 2.14 | 4.28 | NEC | 4.28 LARGEST MOTOR HP: 0.75 FLC 13.80 V/PH: | 120/1 | KVA 1.66 0.00 | 0.00 | 0.00 | 1.00 | 0.00 KITCHEN 0.00 | 0.00 | 0.00 | 0.65 MISCELLANEOUS 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 36.86 | 35.24 | 32.97 | 105.07 | TOTAL KVA TOTAL AMPS 165.6

LOAD (KVA)

A B C KVA

**TOTALS** 0.00 | 0.00 | 0.00 | 4.28 | 56.37 | 0.00 1. PROVIDE HACR BREAKERS FOR ALL HVAC EQUIPMENT 2. PROVIDE A TYPED BREAKER SCHEDULE ON THE INSIDE OF THE DOOR

HISTORY # DATE DESCRIPTION 1 08/18/2021 ADDENDUM #2



**PANELBOARD SCHEDULES** 

1255 West 15th Street, Suite 300 - Plano, TX 75075 PH: 469.467.0200 FAX: 469.467.0300 Email: mdengca@md-eng.com Project No.: 201254

WIGINTO

SARGENT

**HISTORY** # DATE DESCRIPTION
1 08/18/2021 ADDENDUM #2

JOHN VINCENT

RELAY / POWER TO MECHANICAL

SCHEDULES

	H	IYDRONI	C WATER	VALVE/A	CTUATOR SC	HEDULE				
ASSOCIATED EQUIPMENT	LEVEL		ELECTRICAL	_	CIRCUIT	C/B	WIRE & CONDUIT	DISCONNECT		
ASSOCIATED EQUIT MENT		V/PH	MCA	MOCP	CINCOIT	C/B	WINE & CONDOIT	DISCONNECT		
AHU-I-1	1	120/1	0.2	15	ON LC-67	SEE MOTORIZED DAMPER SCHEDULE , SAME CIRCUIT AND E				
AHU-I-1	1	1 120/1 0		15	ON LC-07	SEE MOTOR	IZED DAWFER SCHEDULE	, SAME CIRCUIT AND BREAKE		
AHU-I-2	1	120/1	0.2	15	ON LC-69	SEE MOTOR	UZED DAMDED SCHEDIJI E	SAME CIDCUIT AND BREAKE		
AHU-I-2	1	120/1	0.2	15	ON LC-09	SEE MOTOR	DTORIZED DAMPER SCHEDULE , SAME CIRCUIT AND BREAKI			
AHU-I-3	1	120/1	0.2	15	ON L C 71	SEE MOTOR	EE MOTORIZED DAMPER SCHEDULE , SAME CIRCUIT AND BREA			
AHU-I-3	1	120/1	0.2	15	ON LC-71	SEE MOTOR	IZED DAWPER SCHEDULE	, SAME CIRCUIT AND BREAKE		
AHU-I-4	1	120/1	0.2	15	10.72	15/1	2 #42 4 #420 2/4" 0	DECEDTACLE		
ΔΗΙ LL-Λ	1	120/1	0.2	15	LC-73	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE		

LOAD

LIGHT

VOLTS

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

277

REMARKS

**DORMITORIES** 

DOUBLE OCCUPANCY CELL

DORMITORIES

WALKWAY & RESTROOMS

DORMITORIES

WALKWAY & RESTROOM

DAYROOM

OUTDOOR EXERCISE YARD

IN TRIANGULAR CHASE (2106)

120 IN TRIANGULAR CHASE (2206)

120 IN TRIANGULAR CHASE (2306)

DESCRIPTION

DORMS 3101, 3104, 3108, 3109,...

CELL 3227

**CELL 3226** 

CELL 3225

**CELL 3224** 

CELL 3221

CELL 3219

CELL 3218

CELL 3217

CELL 3215

CELL 3214

CELL 3213

CELL 3207

CELL 3206

CELL 3205

CELL 3204 **CELL 3203** 

CELL 3202

**CELL 3201** 

R/ROOM 3105/3106, 3107,...

R/ROOM 3303/3304, WALKWAY

DAYROOM 2201

DAYROOM 2201

DAYROOM 2301

EXERCISE YARD 2108 EXERCISE YARD 2208

EXERCISE YARD 2308

WATER CUT-OFF VALVE

WATER CUT-OFF VALVE

WATER CUT-OFF VALVE

SPARE SPARE SPARE SPARE

SPARE SPARE

SPARE

SPARE

SPARE

SPARE SPARE

SPARE

SPARE

SPARE

SPARE

HD-55 R/ROOM 3208/3209, 3222, VES...

NUMBER CIRCUIT

R3-2

R3-3

R3-5

R3-6

R3-7

R3-8

R3-9

R3-10

R3-11

R3-12

R3-13

R3-14

R3-15

R3-16

R3-18

R3-19

R3-23

R3-24

R3-25

R3-26

R3-27

R3-29

R3-30

R3-31

R3-32

R3-38

R3-40

R3-41

R3-42

R3-43

R3-45

R3-46

R3-47

R3-48

			٧,	101071	101001						
CCV-1	AHU-I-1	1	120/1	0.2	15	ON LC-67	SEE MOTORI	ZED DAMBED SCHEDUI E	SAME CIRCUIT AND BREAKER		
HCV-1	AHU-I-1	1	120/1	0.2	15	ON LC-67	SEE WOTORIA	ZED DAMPER SCHEDULE,	SAME CIRCUIT AND BREAKER		
CCV-2	AHU-I-2	1	120/1	0.2	15	ON 1 C 60	SEE MOTORI	ZED DAMBED COLIEDUI E			
HCV-2	AHU-I-2	1	120/1	0.2	15	ON LC-69	SEE MOTORIA	SEE MOTORIZED DAMPER SCHEDULE , SAME CIRCUIT AND BREAKER			
CCV-3	AHU-I-3	1	120/1	0.2	15	ON LC-71	SEE MOTORI				
HCV-3	AHU-I-3	1	120/1	0.2	15	ON LC-71	SEE WOTORIA	ZED DAMPER SCHEDULE,	SAME CIRCUIT AND BREAKER		
CCV-4	AHU-I-4	1	120/1	0.2	15	LC-73	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE		
HCV-4	AHU-I-4	1	120/1	0.2	15	_ LC-73	13/1	2 #12, 1 #12G, 3/4 C	RECEPTAGLE		
CCV-5	AHU-I-5	1	120/1	0.2	15	LC-75	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE		
HCV-5	AHU-I-5	1	120/1	0.2	15	LG-75	15/1	2 # 12, 1 # 12G, 3/4 G	NEGER LAGLE		
CCV-6	AHU-I-6	TIER	120/1	0.2	15	ON LD-36	SEE MOTORI	ZED DAMDED SCHEDI II E	SAME CIRCUIT AND BREAKER		
HCV-6	AHU-I-6	TIER	120/1	0.2	15	ON LD-30	SEE WOTOKI	ZED DAMPER SCHEDULE,	SAME CIRCUIT AND BREAKEN		
CCV-7	AHU-I-7	TIER	120/1	0.2	15	ON LD-38	SEE MOTORI	ZED DAMDED SCHEDI II E	SAME CIRCUIT AND BREAKER		
HCV-7	AHU-I-7	TIER	120/1	0.2	15	ON LD-36	SEE WOTOKI	ZED DAMPER SCHEDULE,	SAME CIRCUIT AND BREAKEN		
CCV-8	AHU-I-8	TIER	120/1	0.2	15	ON LD-40	SEE MOTORI	ZED DAMDED SCHEDI II E	SAME CIRCUIT AND BREAKER		
HCV-8	AHU-I-8	TIER	120/1	0.2	15	ON LD-40	SEE WOTOKI	ZED DAWFER SOFIEDULE,	SAME CINCUIT AND BILLAREN		
CCV-9	AHU-I-9	TIER	120/1	0.2	15	ON LD-42	SEE MOTORI	ZED DAMDED SCHEDI II E	SAME CIRCUIT AND BREAKER		
HCV-9	AHU-I-9	TIER	120/1	0.2	15	ON LD-42	GEE WOTONIA	LLD DAWN LIX GONLLDOLL,	ONINE ON COLL AND DIVERNELY		
CCV-10	AHU-I-1-0	TIER	120/1	0.2	15	LD-44	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE		
HCV-10	AHU-I-1-0	TIER	120/1	0.2	15	L <i>D</i> -44	13/1	2 # 12, 1 # 12G, 3/4 G	NEGER FACE		
	DEL AV COLLED		EL D4 (E						DEL AV COLLEDIU D		
	RELAY SCHED				IN I AKE)				RELAY SCHEDULE		
	LOC	CATION: ELEC	I KICAL KO	OM 1026	. 1	DEL 14 DI 10		NUMBER OF OUR OUT	LOCATION: LE		

		RELAY SCHEDULE - P	ANEL R1 (BO	OKING/II	NTAKE)	
			ECTRICAL ROOM		,	
NUMBER	CIRCUIT	DESCRIPTION/ROOM	LOAD	VOLTS	REMARKS	
R1-1		HOLDING CELL 1330	LIGHT	277		
R1-2		HOLDING CELL 1329	LIGHT	277		
R1-3		HOLDING CELL 1328	LIGHT	277		
R1-4		HOLDING CELL 1327	LIGHT	277		
R1-5		HOLDING CELL 1326	LIGHT	277		
R1-6		HOLDING CELL 1325	LIGHT	277		
R1-7		HOLDING CELL 1323	LIGHT	277		
R1-8		HOLDING CELL 1322	LIGHT	277		
R1-9		HOLDING CELL 1007	LIGHT	120		
R1-10		HOLDING CELL 1008	LIGHT	277	HOLDING CELLS ON EAST AND	
R1-11	HB-27	HOLDING CELL 1009	LIGHT	277	WEST SIDE OF INTAKE/BOOKING	
R1-12		HOLDING CELL 1011	LIGHT	277	AREA	
R1-13		HOLDING CELL 1024	LIGHT	277		
R1-14		HOLDING CELL 1118	LIGHT	277		
R1-15		HOLDING CELL 1119	LIGHT	277		
R1-16			HOLDING CELL 1121	LIGHT	277	
R1-17			HOLDING CELL 1122	LIGHT	277	
R1-18		HOLDING CELL 1123	LIGHT	277		
R1-19		HOLDING CELL 1124	LIGHT	277		
R1-20		HOLDING CELL 1125	LIGHT	277		
R1-21		HOLDING CELL 1126	LIGHT	277		
R1-22	HB-21	VEHICLE SALLY PORT	LIGHT	277	LIGHTS IN CENTER ROW ONLY	
R1-23	HB-1/3/5	VEHICLE SALLY PORT	FAN	480/3	EXTRACTOR FAN SPEF-01	
R1-24		SPARE				
R1-25	LB-50	TVs WAITING 1105 & 1106	RECEPTACLES	120	TVs- POWER ABOVE CEILING	
R1-26	LB-51	TVs WAITING 1105 & 1106	RECEPTACLES	120	1 VS- FOWER ADOVE CEILING	
R1-27		SPARE				
R1-28		SPARE				
R1-29		SPARE				
R1-30		SPARE				
R1-31		SPARE				
R1-32		SPARE				

RELAY SCHEDULE - PANEL R2 (LEVEL 1)	R1-32		SPARE			
NUMBER						
NUMBER   CIRCUIT   DESCRIPTION/ROOM   LOAD   VOLTS   REMARKS			RELAY SCHEDULE	E - PANEL R2	(LEVEL	1)
R2-1			LOCATION: LEVE	L 1 MECHANICA	L 2013	
R2-2	NUMBER	CIRCUIT	DESCRIPTION/ROOM	LOAD	VOLTS	REMARKS
R2-3	R2-1		DORMS 2111, 2113, 2117, 2118,	LIGHT	277	DORMITORIES
R2-4   CELL 2233	R2-2		CELL 2235	LIGHT	277	
R2-5   R2-6   R2-7   CELL 2228	R2-3		CELL 2234	LIGHT	277	
R2-6   R2-7   R2-8   CELL 2228   LIGHT   120   CELL 2227   LIGHT   277   R2-8   CELL 2225   LIGHT   277   CELL 2225   LIGHT   277   CELL 2223   LIGHT   277   CELL 2223   LIGHT   277   CELL 2222   LIGHT   277   CELL 2221   LIGHT   277   CELL 2214   LIGHT   277   CELL 2215   LIGHT   277   CELL 2215   LIGHT   277   CELL 2215   LIGHT   277   CELL 2215   LIGHT   277   CELL 2214   LIGHT   277   CELL 2214   LIGHT   277   CELL 2214   LIGHT   277   CELL 2212   LIGHT   277   CELL 2214   LIGHT   277   CELL 2212   LIGHT   277   CELL 2212   LIGHT   277   CELL 2212   LIGHT   277   CELL 2214   LIGHT   277   CELL 2214   LIGHT   277   CELL 2214   LIGHT   277   CELL 2219   LIGHT   277   CELL 2219   LIGHT   277   DORMITORIES   R2-20   RROOM 2314/2315, WALKWAY   LIGHT   277   WALKWAY & RESTROOMS   R2-22   RROOM 2314/2315, WALKWAY   LIGHT   277   FUTURE   R2-26   ALTERNATE #1   LIGHT   277   FUTURE   R2-26   ALTERNATE #1   LIGHT   277   FUTURE   R2-28   SPARE   R2-29   R2-29   R2-29   R2-29   R2-29   R2-29   R2-29   R2-29	R2-4		CELL 2233	LIGHT	277	
R2-7   CELL 2227	R2-5		CELL2232	LIGHT	277	
R2-8   R2-9   R2-10   CELL 2225   LIGHT   277   R2-10   R2-11   R2-11   R2-12   CELL 2225   LIGHT   277   R2-12   CELL 2223   LIGHT   277   R2-12   CELL 2221   LIGHT   277   CELL 2221   LIGHT   277   R2-13   CELL 2216   LIGHT   277   R2-14   CELL 2216   LIGHT   277   CELL 2215   LIGHT   277   R2-15   CELL 2214   LIGHT   277   CELL 2214   LIGHT   277   CELL 2212   LIGHT   277   R2-18   CELL 2212   LIGHT   277   CELL 2212   LIGHT   277   CELL 2212   LIGHT   277   R2-18   CELL 2212   LIGHT   277   CELL 2219   LIGHT   277   R2-19   CELL 2209   LIGHT   277   R2-20   R7ROOM 2311, 2312, 2313, 2316   LIGHT   277   R7ROOM 2311, 2315, 2315, 2316   LIGHT   277   R7ROOM 2314, 2115, 2116   LIGHT   277   R7ROOM 2314, 2315, WALKWAY   LIGHT   277   R7ROOM 2314, 2315, WALKWAY   LIGHT   277   R7ROOM 2314, 2315, WALKWAY   LIGHT   277   R7-224   ALTERNATE #1   LIGHT   277   LIGHT   277   R7-225   ALTERNATE #1   LIGHT   277   R7-226   ALTERNATE #1   LIGHT   277   R7-227   ALTERNATE #1   LIGHT   277   R7-228   SPARE   R7-229   SPARE   R7-229   SPARE   R7-230   LC-29   SPARE   R7-230   LC-29   ROPT DAYROOM 201   RECEPTACLE   120   CONVENIENCE   R7-231   LC-29   ROPT DAYROOM 201   RECEPTACLE   120   CONVENIENCE   R7-232   LC-23   TV's DAYROOM 201   RECEPTACLE   120   CONVENIENCE   R7-234   LC-23   TV's DAYROOM 201   RECEPTACLE   120   CONVENIENCE   R7-235   LC-25   ROPT DAYROOM 201   RECEPTACLE   120   TELEVISIONS   R7-236   LC-27   TV's DAYROOM 201   RECEPTACLE   120   CONVENIENCE   R7-236   LC-27   TV's DAYROOM 201   RECEPTACLE   120   CONVENIENCE   R7-236   LC-27   TV's DAYROOM 201   RECEPTACLE   120   CONVENIENCE   R7-236   LC-25   ROPT DAYROOM 201   RECEPTACLE   120   TELEVISIONS   R7-236   LC-25   ROPT DAYROOM 201   RECEPTACLE   120   TELEVISION	R2-6		CELL 2228	LIGHT	120	
R2-9   R2-10   R2-10   R2-11   R2-11   R2-11   R2-11   R2-11   R2-11   R2-12   R2-13   R2-14   R2-13   R2-14   R2-14   R2-15   R2-16   R2-16   R2-16   R2-16   R2-17   R2-16   R2-16   R2-16   R2-17   R2-18   R2-18   R2-18   R2-19   R2-18   R2-19   R2-19	R2-7		CELL 2227	LIGHT	277	
R2-10   R2-11   RC-53   CELL 2223	R2-8		CELL 2226	LIGHT	277	
R2-11   R2-12   R2-12   R2-12   R2-12   R2-13   CELL 2221   LIGHT   277   CELL 2216   LIGHT   277   R2-14   CELL 2216   LIGHT   277   R2-15   CELL 2214   LIGHT   277   R2-16   CELL 2213   LIGHT   277   CELL 2213   LIGHT   277   R2-16   CELL 2213   LIGHT   277   CELL 2212   LIGHT   277   CELL 2212   LIGHT   277   CELL 2212   LIGHT   277   CELL 2219   LIGHT   277   CELL 2219   LIGHT   277   CELL 2219   LIGHT   277   DORMS 2311, 2312, 2313, 2316,   LIGHT   277   DORMS 2311, 2312, 2313, 2316,   LIGHT   277   R2-21   R7ROOM 2114, 2115, 2116,   LIGHT   277   R7ROOM 2217/2218, 2229,   LIGHT   277   R7ROOM 2217/2218, 2229,   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R2-26   ALTERNATE #1   LIGHT   277   R2-26   ALTERNATE #1   LIGHT   277   R2-28   SPARE   R2-29   SPARE   R2-29   SPARE   R2-30   SPARE   R2-31   LC-29   RCPT DAYROOM 2101   RECEPTACLE   120   CONVENIENCE   R2-32   LC-31   TV's DAYROOM 2101   RECEPTACLE   120   TELEVISIONS   R2-33   LC-21   RCPT DAYROOM 2201   RECEPTACLE   120   TELEVISIONS   R2-34   LC-25   RCPT DAYROOM 2301   RECEPTACLE   120   TELEVISIONS   R2-35   LC-27   TV's DAYROOM 2301   RECEPTACLE   120   TELEVISIONS   R2-36   LC-37   RCPT MULTIPURPOSE 2204   RECEPTACLE   120   TELEVISIONS   R2-38   LC-38   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   TELEVISIONS   R2-39   LC-33   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   TELEVISIONS   R2-39   LC-33   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   TELEVISIONS   R2-34   LC-35   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   TELEVISIONS   R2-34   LC-35   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   TELEVISIONS   R2-34   LC-35   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   T	R2-9		CELL 2225	LIGHT	277	
R2-11 R2-12 R2-13 R2-14 R2-14 CELL 2216 LIGHT 277 R2-15 R2-16 CELL 2216 LIGHT 277 R2-16 CELL 2216 LIGHT 277 R2-17 R2-17 R2-18 R2-18 R2-18 R2-19 CELL 2214 LIGHT 277 CELL 2213 LIGHT 277 R2-18 R2-19 CELL 2212 LIGHT 277 CELL 2219 LIGHT 277 R2-18 R2-19 CELL 220 DORMS 2311, 2312, 2313, 2316 LIGHT 277 R2-20 DORMS 2311, 2312, 2313, 2316 LIGHT 277 R2-21 R2-21 R2-22 R2-23 R7-COM 2314/2315, WALKWAY LIGHT 277 R2-24 R1-ERNATE #1 LIGHT 277 R2-25 R2-24 ALTERNATE #1 LIGHT 277 R2-26 ALTERNATE #1 LIGHT 277 R2-27 ALTERNATE #1 LIGHT 277 R2-28 R2-29 SPARE R2-29 SPARE R2-29 SPARE R2-30 R2-30 SPARE R2-30 R2-31 LC-29 RCPT DAYROOM 2101 RECEPTACLE R2-32 LC-31 TV'S DAYROOM 2201 RECEPTACLE R2-33 LC-25 RCPT DAYROOM 2201 RECEPTACLE R2-34 LC-25 RCPT DAYROOM 2201 RECEPTACLE R2-35 RC-36 LC-27 TV'S DAYROOM 2201 RECEPTACLE R2-36 R2-37 LC-37 RCPT MULTIPURPOSE 2104 RECEPTACLE R2-39 LC-33 RCPT MULTIPURPOSE 2204 RECEPTACLE R2-30 R2-39 LC-33 RCPT MULTIPURPOSE 2204 RECEPTACLE R2-30 R2-31 LC-33 RCPT MULTIPURPOSE 2204 RECEPTACLE R2-34 R2-35 RCPT MULTIPURPOSE 2204 RECEPTACLE R2-36 R2-37 RC-37 RCPT MULTIPURPOSE 2204 RECEPTACLE R2-38 R2-39 LC-33 RCPT MULTIPURPOSE 2204 RECEPTACLE R2-40 ALTERNATE #1 RECEPTACLE R2-41 R2-42 R2-44 SPARE R2-45 SPARE R2-45 SPARE R2-45 SPARE R2-46 R2-46 SPARE R2-47 SPARE	R2-10		CELL 2223	LIGHT	277	
R2-13   R2-14   R2-15   CELL 2216   LIGHT   277   CELL 2215   LIGHT   277   R2-16   CELL 2215   LIGHT   277   R2-16   CELL 2213   LIGHT   277   R2-17   CELL 2212   LIGHT   277   R2-18   CELL 2211   LIGHT   277   CELL 2211   LIGHT   277   R2-18   CELL 2211   LIGHT   277   CELL 2219   LIGHT   277   DORMITORIES   R2-20   DORMS 2311, 2312, 2313, 2316,   LIGHT   277   DORMITORIES   R2-21   R7ROOM 2114, 2115, 2116,   LIGHT   277   R7ROOM 2147/218, 2229,   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R2-25   ALTERNATE #1   LIGHT   277   R2-25   ALTERNATE #1   LIGHT   277   R2-26   ALTERNATE #1   LIGHT   277   R2-28   ALTERNATE #1   LIGHT   277   R2-28   ALTERNATE #1   LIGHT   277   R2-28   ALTERNATE #1   LIGHT   277   R2-29   SPARE   R2-29   SPARE   R2-29   SPARE   R2-29   SPARE   R2-30   SPARE   R2-30   SPARE   R2-31   LC-29   RCPT DAYROOM 2101   RECEPTACLE   120   CONVENIENCE   R2-31   LC-23   TV* DAYROOM 2101   RECEPTACLE   120   CONVENIENCE   R2-34   LC-23   TV* DAYROOM 2201   RECEPTACLE   120   CONVENIENCE   R2-34   LC-25   RCPT DAYROOM 2201   RECEPTACLE   120   CONVENIENCE   R2-35   LC-25   RCPT DAYROOM 2301   RECEPTACLE   120   CONVENIENCE   R2-36   LC-27   TV* DAYROOM 2301   RECEPTACLE   120   CONVENIENCE   R2-36   LC-27   TV* DAYROOM 2301   RECEPTACLE   120   CONVENIENCE   R2-36   LC-37   RCPT MULTIPURPOSE 2104   RECEPTACLE   120   CONVENIENCE   R2-39   LC-33   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   CONVENIENCE   R2-44   ALTERNATE #1   RECEPTACLE   120   FUTURE   R2-44   ALTERNATE #1   RECEPTACLE   120   FUTURE   R2-45   SPARE   R2-45	R2-11	HC-53	CELL 2222	LIGHT	277	DOUBLE OCCUPANCY CELL
R2-13   R2-14   R2-15   CELL 2216   LIGHT   277   CELL 2215   LIGHT   277   R2-16   CELL 2215   LIGHT   277   R2-16   CELL 2213   LIGHT   277   R2-17   CELL 2212   LIGHT   277   R2-18   CELL 2211   LIGHT   277   CELL 2211   LIGHT   277   R2-18   CELL 2211   LIGHT   277   CELL 2219   LIGHT   277   DORMITORIES   R2-20   DORMS 2311, 2312, 2313, 2316,   LIGHT   277   DORMITORIES   R2-21   R7ROOM 2114, 2115, 2116,   LIGHT   277   R7ROOM 2147/218, 2229,   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R7ROOM 2314/2315, WALKWAY   LIGHT   277   R2-25   ALTERNATE #1   LIGHT   277   R2-25   ALTERNATE #1   LIGHT   277   R2-26   ALTERNATE #1   LIGHT   277   R2-28   ALTERNATE #1   LIGHT   277   R2-28   ALTERNATE #1   LIGHT   277   R2-28   ALTERNATE #1   LIGHT   277   R2-29   SPARE   R2-29   SPARE   R2-29   SPARE   R2-29   SPARE   R2-30   SPARE   R2-30   SPARE   R2-31   LC-29   RCPT DAYROOM 2101   RECEPTACLE   120   CONVENIENCE   R2-31   LC-23   TV* DAYROOM 2101   RECEPTACLE   120   CONVENIENCE   R2-34   LC-23   TV* DAYROOM 2201   RECEPTACLE   120   CONVENIENCE   R2-34   LC-25   RCPT DAYROOM 2201   RECEPTACLE   120   CONVENIENCE   R2-35   LC-25   RCPT DAYROOM 2301   RECEPTACLE   120   CONVENIENCE   R2-36   LC-27   TV* DAYROOM 2301   RECEPTACLE   120   CONVENIENCE   R2-36   LC-27   TV* DAYROOM 2301   RECEPTACLE   120   CONVENIENCE   R2-36   LC-37   RCPT MULTIPURPOSE 2104   RECEPTACLE   120   CONVENIENCE   R2-39   LC-33   RCPT MULTIPURPOSE 2304   RECEPTACLE   120   CONVENIENCE   R2-44   ALTERNATE #1   RECEPTACLE   120   FUTURE   R2-44   ALTERNATE #1   RECEPTACLE   120   FUTURE   R2-45   SPARE   R2-45			CELL 2221	LIGHT	277	
R2-14   CELL 2215						
R2-16   R2-16   R2-16   R2-17   CELL 2213						
R2-16   R2-17   CELL 2213						
R2-17   R2-18   CELL 2212						
R2-18						
R2-19						
R2-20						
R2-21						DODMITORIES
R2-22         HC-55         R/ROOM 2217/2218, 2229         LIGHT         277         WALKWAY & RESTROOMS           R2-23         R/ROOM 2314/2315, WALKWAY         LIGHT         277         R2-24         ALTERNATE #1         LIGHT         277         R2-25         ALTERNATE #1         LIGHT         277         FUTURE           R2-26         ALTERNATE #1         LIGHT         277         FUTURE         R2-27         ALTERNATE #1         LIGHT         277         FUTURE           R2-27         ALTERNATE #1         LIGHT         277         FUTURE         R2-27         R2-28         ALTERNATE #1         LIGHT         277         FUTURE         R2-29         SPARE         R2-29         SPARE         R2-29         SPARE         R2-29         SPARE         R2-29         SPARE         R2-29         SPARE         R2-30         SPARE         R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE         R2-32         LC-31         TV's DAYROOM 2201         RECEPTACLE         120         CONVENIENCE         R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         TELEVISIONS         R2-34         LC-23         TV's DAYROOM 2301         RECEPTACLE         120         CONVENIENCE         R2			, , , ,			DONINITORIES
R2-23		LIC EE				MALKIMAY & DESTROOMS
R2-24         ALTERNATE #1         LIGHT         277           R2-25         ALTERNATE #1         LIGHT         277           R2-26         ALTERNATE #1         LIGHT         277           R2-27         ALTERNATE #1         LIGHT         277           R2-28         ALTERNATE #1         LIGHT         277           R2-29         SPARE         R2-29         SPARE           R2-29         SPARE         R2-29         SPARE           R2-30         SPARE         R2-30         SPARE           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         TELEVISIONS           R2-32         LC-31         TV's DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37		HC-55	·			WALKWAY & RESTROOMS
R2-25			·			
R2-26         ALTERNATE #1         LIGHT         277         FUTURE           R2-27         ALTERNATE #1         LIGHT         277           R2-28         ALTERNATE #1         LIGHT         277           R2-29         SPARE         277           R2-28         SPARE         277           R2-29         SPARE         277           R2-29         SPARE         272           R2-30         SPARE         272           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE						
R2-27         ALTERNATE #1         LIGHT         277           R2-28         ALTERNATE #1         LIGHT         277           R2-29         SPARE         R2-28         SPARE           R2-29         SPARE         R2-30         SPARE           R2-30         SPARE         R2-30         SPARE           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         TELEVISIONS           R2-38         LC-35         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-40         A						FUTURE
R2-28         ALTERNATE #1         LIGHT         277           R2-29         SPARE         R2-28         SPARE           R2-29         SPARE         R2-30         SPARE           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2304						FUTURE
R2-29         SPARE           R2-28         SPARE           R2-29         SPARE           R2-30         SPARE           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         TELEVISIONS           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-35         LC-23         TV's DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         FUTURE					<del>                                     </del>	
R2-28         SPARE           R2-29         SPARE           R2-30         SPARE           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         TELEVISIONS           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-34         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         TELEVISIONS           R2-38         LC-35         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1 <td></td> <td></td> <td></td> <td>LIGHT</td> <td>277</td> <td></td>				LIGHT	277	
R2-29         SPARE           R2-30         SPARE           R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         TELEVISIONS           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-36         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-40         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td></tr<>						
R2-30         SPARE         R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         TELEVISIONS           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-40         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-43         SPARE         SPARE						
R2-31         LC-29         RCPT DAYROOM 2101         RECEPTACLE         120         CONVENIENCE           R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         TELEVISIONS           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-40         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-43         SPARE         SPARE         SPARE           R2-44						
R2-32         LC-31         TV's DAYROOM 2101         RECEPTACLE         120         TELEVISIONS           R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-36         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-40         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-43         SPARE         SPARE           R2-45		I C-29		RECEPTACI E	120	CONVENIENCE
R2-33         LC-21         RCPT DAYROOM 2201         RECEPTACLE         120         CONVENIENCE           R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-40         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-42         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-43         SPARE         SPARE           R2-44         SPARE         SPARE           R2-45         SPARE         SPARE           R2-47         SPARE         SPARE </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
R2-34         LC-23         TV's DAYROOM 2201         RECEPTACLE         120         TELEVISIONS           R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV's DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         FUTURE           R2-40         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-42         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-43         SPARE         SPARE           R2-44         SPARE         SPARE           R2-45         SPARE         SPARE           R2-47         SPARE         SPARE						
R2-35         LC-25         RCPT DAYROOM 2301         RECEPTACLE         120         CONVENIENCE           R2-36         LC-27         TV'S DAYROOM 2301         RECEPTACLE         120         TELEVISIONS           R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120         CONVENIENCE           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120         CONVENIENCE           R2-40         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-42         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-43         SPARE         SPARE           R2-44         SPARE         SPARE           R2-45         SPARE         SPARE           R2-46         SPARE         SPARE           R2-47         SPARE         SPARE						
R2-37         LC-37         RCPT MULTIPURPOSE 2104         RECEPTACLE         120           R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120           R2-40         ALTERNATE #1         RECEPTACLE         120           R2-41         ALTERNATE #1         RECEPTACLE         120           R2-42         ALTERNATE #1         RECEPTACLE         120           R2-43         SPARE         120           R2-44         SPARE         120           R2-45         SPARE         120           R2-46         SPARE         120           R2-47         SPARE         120						
R2-38         LC-35         RCPT MULTIPURPOSE 2204         RECEPTACLE         120         CONVENIENCE           R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120           R2-40         ALTERNATE #1         RECEPTACLE         120           R2-41         ALTERNATE #1         RECEPTACLE         120           R2-42         ALTERNATE #1         RECEPTACLE         120           R2-43         SPARE         120           R2-44         SPARE         120           R2-45         SPARE         120           R2-46         SPARE         120           R2-47         SPARE         120	R2-36	LC-27	TV's DAYROOM 2301	RECEPTACLE	120	TELEVISIONS
R2-39         LC-33         RCPT MULTIPURPOSE 2304         RECEPTACLE         120           R2-40         ALTERNATE #1         RECEPTACLE         120           R2-41         ALTERNATE #1         RECEPTACLE         120           R2-42         ALTERNATE #1         RECEPTACLE         120           R2-43         SPARE         120           R2-44         SPARE         120           R2-45         SPARE         120           R2-46         SPARE         120           R2-47         SPARE         120	R2-37	LC-37	RCPT MULTIPURPOSE 2104	RECEPTACLE	120	
R2-40       ALTERNATE #1       RECEPTACLE       120         R2-41       ALTERNATE #1       RECEPTACLE       120         R2-42       ALTERNATE #1       RECEPTACLE       120         R2-43       SPARE       120         R2-44       SPARE       120         R2-45       SPARE       120         R2-46       SPARE       120         R2-47       SPARE       120         R2-47       SPARE       120         R2-48       SPARE       120         R2-49       SPARE       120         R2-49       SPARE       120         R2-49       SPARE       120         R2-49       SPARE       120	R2-38	LC-35	RCPT MULTIPURPOSE 2204	RECEPTACLE	120	CONVENIENCE
R2-41         ALTERNATE #1         RECEPTACLE         120         FUTURE           R2-42         ALTERNATE #1         RECEPTACLE         120           R2-43         SPARE         120           R2-44         SPARE         120           R2-45         SPARE         120           R2-45         SPARE         120           R2-46         SPARE         120           R2-47         SPARE         120	R2-39	LC-33	RCPT MULTIPURPOSE 2304	RECEPTACLE	120	
R2-42         ALTERNATE #1         RECEPTACLE         120           R2-43         SPARE            R2-44         SPARE            R2-45         SPARE            R2-46         SPARE            R2-47         SPARE	R2-40		ALTERNATE #1	RECEPTACLE	120	
R2-43         SPARE           R2-44         SPARE           R2-45         SPARE           R2-46         SPARE           R2-47         SPARE	R2-41		ALTERNATE #1	RECEPTACLE	120	FUTURE
R2-44         SPARE           R2-45         SPARE           R2-46         SPARE           R2-47         SPARE	R2-42		ALTERNATE #1	RECEPTACLE	120	
R2-45         SPARE           R2-46         SPARE           R2-47         SPARE						
R2-46         SPARE           R2-47         SPARE	R2-44		SPARE			
R2-47 SPARE	R2-45		SPARE			
	R2-46		SPARE			
R2-48 SPARE	R2-47		SPARE			
	R2-48		SPARE			

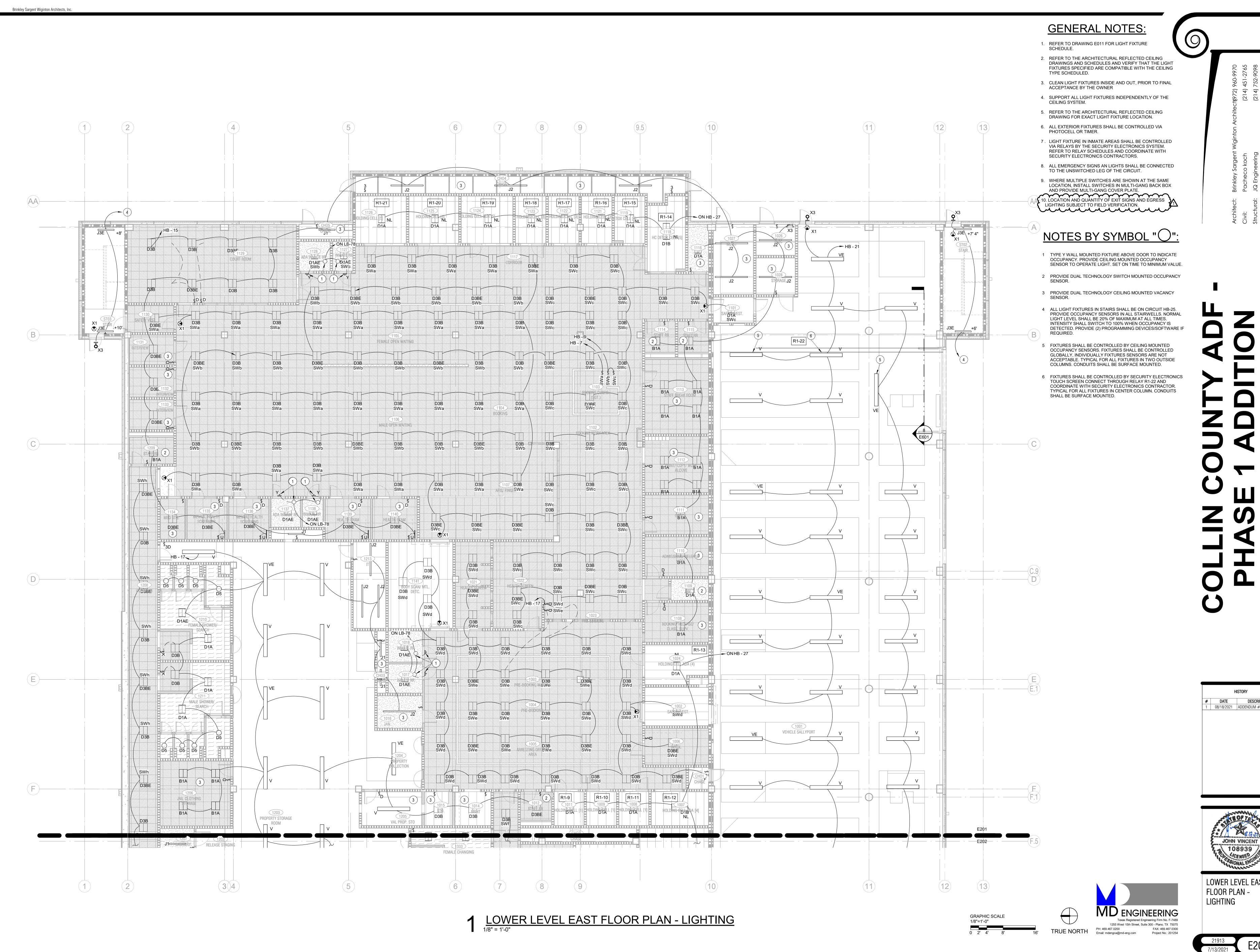
SEF-02   ZONE 1 - SMOKE EXHAUST   15   480/3   21   HE-1/3/5   40/3   3 #10,1 #10G, 3/4" C   3P160A/36AF/3R   SEF-02   ZONE 2 - SMOKE EXHAUST   40   480/3   52   HE-1/3/5/11   100/3   3 #4,1 #8G, 1.25" C   3P160A/80AF/3R   SEF-03   ZONE 3 - SMOKE EXHAUST   40   480/3   52   HE-1/3/5/17   100/3   3 #4,1 #8G, 1.25" C   3P160A/80AF/3R   SEF-04   ZONE 4 - SMOKE EXHAUST   50   480/3   40   HE-18/17/23   80/3   3 #6,1 #8G, 1.25" C   3P160A/80AF/3R   SEF-05   ZONE 5 - SMOKE EXHAUST   5   480/3   7.6   HE-25/27/29   13/3   3#12,1 #12G, 3/4" C   3P36A/3AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-35/27/29   13/3   3#12,1 #12G, 3/4" C   3P36A/3AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-37/39/41   15/3   3 #12,1 #12G, 3/4" C   3P36A/3AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-37/39/41   15/3   3 #12,1 #12G, 3/4" C   3P36A/3AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-37/39/41   15/3   3 #12,1 #12G, 3/4" C   3P36A/3AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-37/39/41   15/3   3 #12,1 #12G, 3/4" C   3P36A/3AF/3R   SEF-09   ZONE 2 - SMOKE MUA   10   480/3   14   HD-1/39/11   70/3   3 #6,1 #10G, 1"C   3P36A/3AF/3R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #6,1 #10G, 3/4" C   3P36A/3AF/3R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #10,1 #10G, 3/4" C   3P36A/3AF/3R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #10,1 #10G, 3/4" C   3P36A/3AF/3R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #10,1 #10G, 3/4" C   3P36A/3AF/3R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #10,1 #10G, 3/4" C   3P36A/3AF/1R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #10,1 #10G, 3/4" C   3P36A/3AF/1R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #10,1 #10G, 3/4" C   3P36A/3AF/1R   SEF-09   ZONE 3 - SMOKE MUA   15   480/3   21   HD-37/91/11   70/3   3 #10,1 #10G,				F	AN SCHE	DULE			
SEF-01   ZONE 1 - SMOKE EXHAUST   15   480/3   21   HE-1/3/5   40/3   3 ±10, 1 ±10G, 3/4" C   3P/60A/3SAF/3R   SEF-02   ZONE 2 - SMOKE EXHAUST   40   480/3   52   HE-1/3/11   100/3   3 ±0, 1 ±80, 1 ±20" C   3P/100A/80AF/3R   SEF-04   ZONE 3 - SMOKE EXHAUST   30   480/3   40   HE-1/3/123   80/3   3 ±0, 1 ±80, 1 ±20" C   3P/100A/80AF/3R   SEF-06   ZONE 6 - SMOKE EXHAUST   5   480/3   7.6   HE-3/2/123   80/3   3 ±10, 1 ±12G, 3/4" C   3P/60A/50AF/3R   SEF-06   ZONE 6 - SMOKE EXHAUST   5   480/3   7.6   HE-3/3/345   15/3   3 ±12, 1 ±12G, 3/4" C   3P/50A/5AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-3/3/345   15/3   3 ±12, 1 ±12G, 3/4" C   3P/50A/5AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-3/3/345   15/3   3 ±12, 1 ±12G, 3/4" C   3P/50A/5AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-3/3/345   15/3   3 ±12, 1 ±12G, 3/4" C   3P/50A/5AF/3R   SEF-08   ZONE 2 - SMOKE MIMA   25   480/3   34   HD-1/3/11   70/3   3 ±6, 1 ±10G, 1/" C   3P/50A/5AF/3R   SEF-09   ZONE 2 - SMOKE MIMA   15   480/3   21   HD-1/3/11   70/3   3 ±6, 1 ±10G, 1/" C   3P/50A/5AF/1R   SEF-03B   ZONE 3 - SMOKE MIMA   15   480/3   21   HD-1/3/11   70/3   3 ±6, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-03B   ZONE 3 - SMOKE MIMA   15   480/3   21   HD-1/3/11   70/3   3 ±6, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-04   ZONE 3 - SMOKE MIMA   15   480/3   21   HD-1/3/11   70/3   3 ±6, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-05   ZONE 5 - SMOKE MIMA   15   480/3   21   HD-1/3/11   70/3   3 ±6, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-05   ZONE 5 - SMOKE MIMA   15   480/3   21   HD-1/3/11   70/3   3 ±10, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-05   ZONE 5 - SMOKE MIMA   15   480/3   21   HD-1/3/11   70/3   3 ±10, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-05   ZONE 5 - SMOKE MIMA   15   480/3   3 + HD-3/3/35   70/3   3 ±10, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-05   ZONE 6 - SMOKE MIMA   15   480/3   3 + HD-3/3/35   70/3   3 ±10, 1 ±10G, 3/4" C   3P/50A/5AF/1R   SEF-05   ZONE 6 - SMOKE MIMA   15   480/3   3 + HD-3/3/35   70/3   3 ±10	ITENA	SEDVES	E	ELECTRICA	L	CIDCUIT	C/D	MIDE & CONDUIT	DISCONNECT
SEF-02	I I EIVI	SERVES	HP/(W)	V/PH	AMPS	CIRCUIT	C/B	WIRE & CONDUIT	DISCONNECT
SEF-03	SEF-01	ZONE 1 - SMOKE EXHAUST	15	480/3	21	HE-1/3/5	40/3	3 #10, 1 #10G, 3/4" C	3P/60A/35AF/3R
SEF-04	SEF-02	ZONE 2 - SMOKE EXHAUST	40	480/3	52	HE-7/9/11	100/3	3 #4, 1 #8G, 1.25" C	3P/100A/80AF/3R
SEF-06   ZONE 5 - SMOKE EXHAUST   5   480/3   7.6   HE-25/27/29   15/3   3 #12, 1 #126, 34" C   3P/30A/12AF/3R   SEF-06   ZONE 6 - SMOKE EXHAUST   5   480/3   7.6   HE-31/30/3941   15/3   3 #12, 1 #126, 34" C   3P/30A/12AF/3R   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-31/30/3941   15/3   3 #12, 1 #126, 34" C   3P/30A/12AF/3R   SEF-01   ZONE 1 - SMOKE MUA   10   480/3   14   HD-1/3/15   28/3   3 #12, 1 #126, 34" C   3P/30A/20AF/1R   SEF-02   ZONE 2 - SMOKE MUA   15   480/3   21   HD-1/3/15/17   40/3   3 #10, 1 #106, 1" C   3P/60A/30AF/1R   SEF-03A   ZONE 3 - SMOKE MUA   15   480/3   21   HD-1/3/15/17   40/3   3 #10, 1 #106, 34" C   3P/60A/30AF/1R   SEF-03B   ZONE 3 - SMOKE MUA   10   480/3   14   HD-19/21/23   25/3   3 #12, 1 #126, 34" C   3P/60A/30AF/1R   SEF-03B   ZONE 3 - SMOKE MUA   15   480/3   21   HD-25/27/29   40/3   3 #10, 1 #106, 34" C   3P/60A/30AF/1R   SEF-03B   ZONE 3 - SMOKE MUA   25   480/3   34   HD-31/33/35   70/3   3 #10, 1 #106, 34" C   3P/60A/30AF/1R   SEF-04   ZONE 6 - SMOKE MUA   25   480/3   34   HD-31/33/35   70/3   3 #10, 1 #106, 34" C   3P/60A/30AF/1R   SEF-06   ZONE 5 - SMOKE MUA   3   480/3   4.8   HD-31/33/35   70/3   3 #10, 1 #106, 34" C   3P/60A/30AF/1R   SEF-06   ZONE 6 - SMOKE MUA   1.5   480/3   3   HD-37/3941   15/3   3 #12, 1 #126, 34" C   3P/30A/36AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/45/47   15/3   3 #12, 1 #126, 34" C   3P/30A/36AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/45/47   15/3   3 #12, 1 #126, 34" C   3P/30A/36AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/45/47   15/3   3 #12, 1 #126, 34" C   3P/30A/36AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/45/47   15/3   3 #12, 1 #126, 34" C   3P/30A/36AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/45/47   15/3   3 #12, 1 #126, 34" C   3P/30A/36AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/45/47   15/3   3 #12, 1 #126, 34" C   3P/30A/36AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/45/47   15	SEF-03	ZONE 3 - SMOKE EXHAUST	40	480/3	52	HE-13/15/17	100/3	3 #4, 1 #8G, 1.25" C	3P/100A/80AF/3R
SEF-08   ZONE 6 - SMOKE EXHAUST   2   480/3   3.4   HE-31/33/36   15/3   3 #12, 1 #126, 34° C   3P/30A/36AFGR   SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-37/3941   15/3   3 #12, 1 #126, 34° C   3P/30A/26AFGR   SEF-01   ZONE 1 - SMOKE MUA   10   480/3   14   HD-1/3/5   25/3   3 #12, 1 #126, 34° C   3P/30A/20AF/1R   SEF-02   ZONE 2 - SMOKE MUA   25   480/3   34   HD-7/9/11   70/3   3 #6, 1 #106, 1° C   3P/60A/36AF/1R   SEF-03   ZONE 3 - SMOKE MUA   15   480/3   21   HD-31/9/17   40/3   3 #10, 1 #106, 34° C   3P/30A/20AF/1R   SEF-03C   ZONE 3 - SMOKE MUA   15   480/3   21   HD-31/9/17   40/3   3 #10, 1 #106, 34° C   3P/30A/20AF/1R   SEF-03C   ZONE 3 - SMOKE MUA   15   480/3   21   HD-31/9/17   40/3   3 #10, 1 #106, 34° C   3P/30A/20AF/1R   SEF-03C   ZONE 4 - SMOKE MUA   15   480/3   21   HD-26/27/29   40/3   3 #10, 1 #106, 34° C   3P/30A/20AF/1R   SEF-03C   ZONE 4 - SMOKE MUA   25   480/3   34   HD-31/9/33/35   70/3   3 #6, 1 #106, 1° C   3P/60A/50AF/1R   SEF-03   ZONE 6 - SMOKE MUA   3   480/3   4.8   HC-19/21/23   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-05   ZONE 6 - SMOKE MUA   3   480/3   4.8   HC-19/21/23   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-3/345/47   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-3/345/47   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-3/345/47   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-3/345/47   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-3/345/47   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-3/345/47   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-3/345/47   15/3   3 #12, 1 #126, 34° C   3P/30A/35AF/1R   SEF-07   SW DORM - EXHAUST   1/4   120/1   5.8   LD-38   15/1   2 #12, 1 #126, 34°	SEF-04	ZONE 4 - SMOKE EXHAUST	30	480/3	40	HE-19/21/23	80/3	3 #6, 1 #8G, 1" C	3P/60A/60AF/3R
SEF-07   ZONE 7 - SMOKE EXHAUST   5   480/3   7.6   HE-37/39/41   15/3   3 #12, 1 #12G, 34" C   3P/30A/2DAF/IR   SSF-01   ZONE 2 - SMOKE MUA   25   480/3   34   HD-1/9/11   70/3   3 #12, 1 #12G, 34" C   3P/30A/2DAF/IR   SSF-03A   ZONE 3 - SMOKE MUA   15   480/3   21   HD-13/15/17   40/3   3 #10, 1 #10G, 34" C   3P/30A/3DAF/IR   SSF-03B   ZONE 3 - SMOKE MUA   15   480/3   21   HD-13/15/17   40/3   3 #10, 1 #10G, 34" C   3P/30A/3DAF/IR   SSF-03B   ZONE 3 - SMOKE MUA   15   480/3   21   HD-13/15/17   40/3   3 #10, 1 #10G, 34" C   3P/30A/3DAF/IR   SSF-03B   ZONE 3 - SMOKE MUA   15   480/3   21   HD-25/27/29   40/3   3 #10, 1 #10G, 34" C   3P/30A/3DAF/IR   SSF-03B   ZONE 3 - SMOKE MUA   15   480/3   21   HD-25/27/29   40/3   3 #10, 1 #10G, 34" C   3P/30A/3DAF/IR   SSF-04   ZONE 4 - SMOKE MUA   25   480/3   34   HD-31/33/35   70/3   3 #6, 1 #10G, 1" C   3P/30A/3DAF/IR   SSF-05   ZONE 5 - SMOKE MUA   25   480/3   34   HD-31/33/35   70/3   3 #6, 1 #10G, 1" C   3P/30A/3DAF/IR   SSF-06   ZONE 6 - SMOKE MUA   1.5   480/3   3   HD-37/39/41   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   3   HD-37/39/41   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/35/47   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-34/35/47   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-1/3/5   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-1/3/5   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-1/3/5   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-1/3/5   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-1/3/5   15/3   3 #12, 1 #12G, 34" C   3P/30A/3DAF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-1/3/5   15/3   3 #12, 1 #12G, 34" C   3P/30A/	SEF-05	ZONE 5 - SMOKE EXHAUST	5	480/3	7.6	HE-25/27/29	15/3	3 #12, 1 #12G, 3/4" C	3P/30A/12AF/3R
SSF-01	SEF-06	ZONE 6 - SMOKE EXHAUST	2	480/3	3.4	HE-31/33/35	15/3	3 #12, 1 #12G, 3/4" C	3P/30A/5AF/3R
SSF-02	SEF-07	ZONE 7 - SMOKE EXHAUST	5	480/3	7.6	HE-37/39/41	15/3	3 #12, 1 #12G, 3/4" C	3P/30A/12AF/3R
SSF-03A   ZONE 3 - SMOKE MUA   15   480/3   21   HD-13/15/17   40/3   3 #10, 1 #10G, 3/4" C   3P/80A/35AF/IR   SSF-03B   ZONE 3 - SMOKE MUA   10   480/3   14   HD-19/21/23   25/3   3 #12, 1 #12G, 3/4" C   3P/30A/20AF/IR   SSF-03C   ZONE 3 - SMOKE MUA   15   480/3   21   HD-25/27/29   40/3   3 #10, 1 #10G, 3/4" C   3P/30A/20AF/IR   SSF-04   ZONE 4 - SMOKE MUA   25   480/3   34   HD-31/33/35   70/3   3 #10, 1 #10G, 3/4" C   3P/60A/35AF/IR   SSF-05   ZONE 5 - SMOKE MUA   3   480/3   4.8   HC-19/21/23   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/45AF/IR   SSF-06   ZONE 6 - SMOKE MUA   1.5   480/3   3   HD-31/39/41   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/45AF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-43/45/47   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/45AF/IR   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HB-1/3/5   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/45AF/IR   SSF-01   LOWER LEVEL - EXHAUST   5   480/3   7.6   HB-1/3/5   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SSF-01   LOWER LEVEL - EXHAUST   2   206/1   13 2   LA-63/65   25/2   2 #12, 1 #12G, 3/4" C   2P/30A/20AF/IR   EF-02   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LB-58   15/1   2 #12, 1 #12G, 3/4" C   2P/30A/20AF/IR   EF-03   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LB-58   15/1   2 #12, 1 #12G, 3/4" C   P/30A/20AF/IR   EF-05   NE DORM - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-06   NE DORM - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-07   SW DORM - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-08   SW DORM - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-10   SE RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-10   SE RR / SHOWER - EXHAUST   1/4   120/1   5.8	SSF-01	ZONE 1 - SMOKE MUA	10	480/3	14	HD-1/3/5	25/3	3 #12, 1 #12G, 3/4" C	3P/30A/20AF/1R
SSF-03B   ZONE 3 - SMOKE MUA   10   480/3   14   HD-19/21/23   25/3   3 #12, 1 #12G, 3/4" C   3P/30A/20AF/1R   SSF-03C   ZONE 3 - SMOKE MUA   15   480/3   21   HD-25/27/29   40/3   3 #10, 1 #10G, 3/4" C   3P/60A/35AF/1R   SSF-04   ZONE 6 - SMOKE MUA   25   480/3   34   HD-31/33/35   70/3   3 #6, 1 #10G, 1" C   3P/60A/35AF/1R   SSF-05   ZONE 6 - SMOKE MUA   3   480/3   4.8   HC-19/21/23   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/4.5AF/1R   SSF-06   ZONE 6 - SMOKE MUA   1.5   480/3   3   HD-37/39/41   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/4.5AF/1R   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-43/45/47   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/4.5AF/1R   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HB-13/35   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SPE-01   VEHICLE SALLY PORT EXHAUST   5   480/3   7.6   HB-13/35   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SF-01   LOWER LEVEL - EXHAUST   2   208/1   13.2   LA-63/65   25/2   2 #12, 1 #12G, 3/4" C   2P/30A/20AF/1R   EF-02   LOWER LEVEL - EXHAUST   3/4   120/1   5.8   LD-40   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-03   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-06   NE DORM - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-06   NE DORM - EXHAUST   1/4   120/1   5.8   LD-14   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-08   SW RORM - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RY / SHOWER - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RY / SHOWER - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RY / SHOWER - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-10   SE RR - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-13   SE RR - EXHAUST   1/4   1	SSF-02	ZONE 2 - SMOKE MUA	25	480/3	34	HD-7/9/11	70/3	3 #6, 1 #10G, 1" C	3P/60A/50AF/1R
SSF-03C   ZONE 3 - SMOKE MUA   15   480/3   21   HD-25/27/29   40/3   3 #10, 1 #10G, 3/4" C   3P/60A/35AF/IR	SSF-03A	ZONE 3 - SMOKE MUA	15	480/3	21	HD-13/15/17	40/3	3 #10, 1 #10G, 3/4" C	3P/60A/35AF/1R
SSF-04   ZONE 4 - SMOKE MUA   25   480/3   34   HD-31/33/35   70/3   3 #6, 1 #10G, 1" C   3P/60A/50AF/1R   SSF-05   ZONE 5 - SMOKE MUA   3   480/3   4.8   HC-19/21/23   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/7AF/1R   SSF-07   ZONE 7 - SMOKE MUA   1.5   480/3   3   HD-37/39/41   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/4.5AF/1R   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-37/39/41   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/4.5AF/1R   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-37/39/41   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SPEF-01   VEHICLE SALLY PORT EXHAUST   5   480/3   7.6   HB-1/3/5   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SPEF-01   LOWER LEVEL - EXHAUST   2   208/1   13.2   LA-63/65   25/2   2 #12, 1 #12G, 3/4" C   2P/30A/20AF/1R   EF-02   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LB-58   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-03   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-06   NE DORM - EXHAUST   1/4   120/1   5.8   LD-12   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-06   NE DORM - EXHAUST   1/4   120/1   5.8   LD-14   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW DORM - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RA / SHOWER - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RA / SHOWER - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-10   SE RA / SHOWER - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-10   SE RA / SHOWER - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-11   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-13   SE RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-13   SE RR - EXHAUST	SSF-03B	ZONE 3 - SMOKE MUA	10	480/3	14	HD-19/21/23	25/3	3 #12, 1 #12G, 3/4" C	3P/30A/20AF/1R
SSF-05   ZONE 5 - SMOKE MUA   3   480/3   4.8   HC-19/21/23   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/TAF/1R   SSF-06   ZONE 6 - SMOKE MUA   1.5   480/3   3   HD-37/39/41   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/4.5AF/1R   SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-43/45/47   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SPEF-01   VEHICLE SALLY PORT EXHAUST   5   480/3   7.6   HB-1/3/5   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SPEF-01   LOWER LEVEL - EXHAUST   2   208/1   13.2   LA-63/65   25/2   2 #12, 1 #12G, 3/4" C   2P/30A/20AF/1R   EF-02   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LB-58   15/1   2 #12, 1 #12G, 3/4" C   2P/30A/25A/1R   EF-03   LOWER LEVEL - EXHAUST   3/4   120/1   14   LB-74   25/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-04   NE RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-05   NE DORM - EXHAUST   1/4   120/1   5.8   LD-12   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-06   NE DORM - EXHAUST   1/4   120/1   5.8   LD-14   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-08   SW DORM - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-18   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-18   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-10   SE RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-11   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-12   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-13   SE RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-14   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-15   LOWER LEVEL - EXHAU	SSF-03C	ZONE 3 - SMOKE MUA	15	480/3	21	HD-25/27/29	40/3	3 #10, 1 #10G, 3/4" C	3P/60A/35AF/1R
SSF-06 ZONE 6 - SMOKE MUA 1.5 480/3 3 HD-37/39/41 15/3 3 #12, 1 #12G, 3/4" C 3P/30A/4.5AF/1R SSF-07 ZONE 7 - SMOKE MUA 5 480/3 7.6 HD-43/45/47 15/3 3 #12, 1 #12G, 3/4" C 3P/30A/12AF/3R SPF-01 VEHICLE SALLY PORT EXHAUST 5 480/3 7.6 HB-1/3/5 15/3 3 #12, 1 #12G, 3/4" C 3P/30A/12AF/3R EF-01 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-63/65 25/2 2 #12, 1 #12G, 3/4" C 2P/30A/20AF/1R EF-02 LOWER LEVEL - EXHAUST 1/4 120/1 5.8 LB-58 15/1 2 #12, 1 #12G, 3/4" C 2P/30A/20AF/1R EF-03 LOWER LEVEL - EXHAUST 3/4 120/1 14 LB-74 25/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-04 NE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-10 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-05 NE DORM - EXHAUST 1/4 120/1 5.8 LD-12 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-06 NE DORM - EXHAUST 1/4 120/1 5.8 LD-12 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-07 SW DORM - EXHAUST 1/4 120/1 5.8 LD-14 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-08 SW DORM - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-18 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-12 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-12 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-12 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-15 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-67/69 25/2 2 #12	SSF-04	ZONE 4 - SMOKE MUA	25	480/3	34	HD-31/33/35	70/3	3 #6, 1 #10G, 1" C	3P/60A/50AF/1R
SSF-07   ZONE 7 - SMOKE MUA   5   480/3   7.6   HD-43/45/47   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SPEF-01   VEHICLE SALLY PORT EXHAUST   5   480/3   7.6   HB-17/5/5   15/3   3 #12, 1 #12G, 3/4" C   3P/30A/12AF/3R   SPEF-01   LOWER LEVEL - EXHAUST   2   208/1   13.2   LA-63/65   25/2   2 #12, 1 #12G, 3/4" C   2P/30A/20AF/1R   EF-02   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LB-58   15/1   2 #12, 1 #12G, 3/4" C   P/30A/25A/1R   EF-03   LOWER LEVEL - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-04   NE RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-10   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-05   NE DORM - EXHAUST   1/4   120/1   5.8   LD-12   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-06   NE DORM - EXHAUST   1/4   120/1   5.8   LD-14   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-07   SW DORM - EXHAUST   1/4   120/1   5.8   LD-16   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-08   SW DORM - EXHAUST   1/4   120/1   5.8   LD-18   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-09   SW RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-10   SE RR / SHOWER - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-11   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-20   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-12   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-13   SE RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-14   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-14   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-14   STAFF RR - EXHAUST   1/4   120/1   5.8   LD-24   15/1   2 #12, 1 #12G, 3/4" C   MANUAL MOTOR STARTER   EF-15   LOWER LEVEL - EXHAUST	SSF-05	ZONE 5 - SMOKE MUA	3	480/3	4.8	HC-19/21/23	15/3	3 #12, 1 #12G, 3/4" C	3P/30A/7AF/1R
SPEF-01         VEHICLE SALLY PORT EXHAUST         5         480/3         7.6         HB-1/3/5         15/3         3 #12, 1 #12G, 3/4" C         3P/30A/12AF/3R           EF-01         LOWER LEVEL - EXHAUST         2         208/1         13.2         LA-63/65         25/2         2 #12, 1 #12G, 3/4" C         2P/30A/20AF/1R           EF-02         LOWER LEVEL - EXHAUST         1/4         120/1         5.8         LB-58         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-03         LOWER LEVEL - EXHAUST         3/4         120/1         14         LB-74         25/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-04         NE RY SHOWER - EXHAUST         1/4         120/1         5.8         LD-10         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-05         NE DORM - EXHAUST         1/4         120/1         5.8         LD-12         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-06         NE DORM - EXHAUST         1/4         120/1         5.8         LD-14         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-07         SW DORM - EXHAUST         1/4         120/1         5.8         LD-16         15/1	SSF-06	ZONE 6 - SMOKE MUA	1.5	480/3	3	HD-37/39/41	15/3	3 #12, 1 #12G, 3/4" C	3P/30A/4.5AF/1R
EF-01 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-63/65 25/2 2 #12, 1 #12G, 3/4" C 2P/30A/20AF/1R EF-02 LOWER LEVEL - EXHAUST 1/4 120/1 5.8 LB-58 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-03 LOWER LEVEL - EXHAUST 3/4 120/1 14 LB-74 25/1 2 #12, 1 #12G, 3/4" C 1P/30A/25A/1R EF-04 NE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-10 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-05 NE DORM - EXHAUST 1/4 120/1 5.8 LD-12 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-06 NE DORM - EXHAUST 1/4 120/1 5.8 LD-12 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-07 SW DORM - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-08 SW DORM - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-18 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-22 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-11 STAFF RR - EXHAUST (54) 120/1 0.55 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-12 STAFF RR - EXHAUST (54) 120/1 0.55 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (42) 120/1 0.45 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (54) 120/1 0.45 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (54) 120/1 0.45 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (54) 120/1 0.45 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (54) 120/1 1 0N LD-26 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-15 LOWER LEVEL - EXHAUST 1 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-16 LOWER LEVEL - EXHAUST 1 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 1 10/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER	SSF-07	ZONE 7 - SMOKE MUA	5	480/3	7.6	HD-43/45/47	15/3	3 #12, 1 #12G, 3/4" C	3P/30A/12AF/3R
EF-02 LOWER LEVEL - EXHAUST 1/4 120/1 5.8 LB-58 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-03 LOWER LEVEL - EXHAUST 3/4 120/1 14 LB-74 25/1 2 #12, 1 #12G, 3/4" C 1P/30A/25A/1R EF-04 NE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-10 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-05 NE DORM - EXHAUST 1/4 120/1 5.8 LD-12 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-06 NE DORM - EXHAUST 1/4 120/1 5.8 LD-14 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-07 SW DORM - EXHAUST 1/4 120/1 5.8 LD-14 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-08 SW DORM - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-18 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 STAFF RR - EXHAUST (54) 120/1 0.55 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-12 STAFF RR - EXHAUST (54) 120/1 0.45 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-13 SE RR - EXHAUST (42) 120/1 0.45 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (80) 120/1 1 ON LD-26 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-15 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-67/69 25/2 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-16 LOWER LEVEL - EXHAUST 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 10/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 10/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 10/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 10/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 10/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4"	SPEF-01	VEHICLE SALLY PORT EXHAUST	5	480/3	7.6	HB-1/3/5	15/3	3 #12, 1 #12G, 3/4" C	3P/30A/12AF/3R
EF-03 LOWER LEVEL - EXHAUST 3/4 120/1 14 LB-74 25/1 2 #12, 1 #12G, 3/4" C 1P/30A/25A/1R EF-04 NE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-10 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-05 NE DORM - EXHAUST 1/4 120/1 5.8 LD-12 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-06 NE DORM - EXHAUST 1/4 120/1 5.8 LD-14 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-07 SW DORM - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-08 SW DORM - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-18 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-22 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-11 STAFF RR - EXHAUST (54) 120/1 0.55 EF-12 STAFF RR - EXHAUST (42) 120/1 0.45 EF-13 SE RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-15 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-67/69 25/2 2 #12, 1 #12G, 3/4" C 2P/30A/20AF/IR EF-16 LOWER LEVEL - EXHAUST 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 100/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER	EF-01	LOWER LEVEL - EXHAUST	2	208/1	13.2	LA-63/65	25/2	2 #12, 1 #12G, 3/4" C	2P/30A/20AF/1R
EF-04         NE RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-10         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-05         NE DORM - EXHAUST         1/4         120/1         5.8         LD-12         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-06         NE DORM - EXHAUST         1/4         120/1         5.8         LD-14         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-07         SW DORM - EXHAUST         1/4         120/1         5.8         LD-16         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-08         SW DORM - EXHAUST         1/4         120/1         5.8         LD-18         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-08         SW RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-20         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-19         SW RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-20         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-10         SE RR / SHOWER - EXHAUST         1/4         120/1         0.55         LD-22	EF-02	LOWER LEVEL - EXHAUST	1/4	120/1	5.8	LB-58	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-05         NE DORM - EXHAUST         1/4         120/1         5.8         LD-12         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-06         NE DORM - EXHAUST         1/4         120/1         5.8         LD-14         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-07         SW DORM - EXHAUST         1/4         120/1         5.8         LD-16         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-08         SW DORM - EXHAUST         1/4         120/1         5.8         LD-18         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-09         SW RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-20         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-10         SE RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-20         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-10         SE RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-22         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-11         STAFF RR - EXHAUST         (54)         120/1         0.55         LD-32         15/1<	EF-03	LOWER LEVEL - EXHAUST	3/4	120/1	14	LB-74	25/1	2 #12, 1 #12G, 3/4" C	1P/30A/25A/1R
EF-06 NE DORM - EXHAUST 1/4 120/1 5.8 LD-14 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-07 SW DORM - EXHAUST 1/4 120/1 5.8 LD-16 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-08 SW DORM - EXHAUST 1/4 120/1 5.8 LD-18 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 STAFF RR - EXHAUST (54) 120/1 0.55 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-12 STAFF RR - EXHAUST (42) 120/1 0.45 LD-32 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-13 SE RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (80) 120/1 1 ON LD-26 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-15 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-67/69 25/2 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-16 LOWER LEVEL - EXHAUST 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER	EF-04	NE RR / SHOWER - EXHAUST	1/4	120/1	5.8	LD-10	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-07         SW DORM - EXHAUST         1/4         120/1         5.8         LD-16         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-08         SW DORM - EXHAUST         1/4         120/1         5.8         LD-18         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-09         SW RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-20         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-10         SE RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-22         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-10         STAFF RR - EXHAUST         (54)         120/1         0.55         LD-32         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-12         STAFF RR - EXHAUST         (42)         120/1         0.45         LD-32         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-13         SE RR - EXHAUST         1/4         120/1         5.8         LD-24         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-14         STAFF RR - EXHAUST         (80)         120/1         1         ON LD-26         15/1 <td>EF-05</td> <td>NE DORM - EXHAUST</td> <td>1/4</td> <td>120/1</td> <td>5.8</td> <td>LD-12</td> <td>15/1</td> <td>2 #12, 1 #12G, 3/4" C</td> <td>MANUAL MOTOR STARTER</td>	EF-05	NE DORM - EXHAUST	1/4	120/1	5.8	LD-12	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-08         SW DORM - EXHAUST         1/4         120/1         5.8         LD-18         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-09         SW RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-20         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-10         SE RR / SHOWER - EXHAUST         1/4         120/1         5.8         LD-22         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-11         STAFF RR - EXHAUST         (54)         120/1         0.55         LD-32         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-12         STAFF RR - EXHAUST         (42)         120/1         0.45         LD-32         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-13         SE RR - EXHAUST         1/4         120/1         5.8         LD-24         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-14         STAFF RR - EXHAUST         (80)         120/1         1         ON LD-26         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-15         LOWER LEVEL - EXHAUST         2         208/1         13.2         LA-67/69         25	EF-06	NE DORM - EXHAUST	1/4	120/1	5.8	LD-14	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-09 SW RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-20 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-22 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-11 STAFF RR - EXHAUST (54) 120/1 0.55 EF-12 STAFF RR - EXHAUST (42) 120/1 0.45 EF-13 SE RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-14 STAFF RR - EXHAUST (80) 120/1 1 ON LD-26 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-15 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-67/69 25/2 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER EF-16 LOWER LEVEL - EXHAUST 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #10G, 3/4" C MANUAL MOTOR STARTER  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER	EF-07	SW DORM - EXHAUST	1/4	120/1	5.8	LD-16	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-10 SE RR / SHOWER - EXHAUST 1/4 120/1 5.8 LD-22 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER  EF-11 STAFF RR - EXHAUST (54) 120/1 0.55  EF-12 STAFF RR - EXHAUST (42) 120/1 0.45  EF-13 SE RR - EXHAUST 1/4 120/1 5.8 LD-24 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER  EF-14 STAFF RR - EXHAUST (80) 120/1 1 ON LD-26 15/1 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER  EF-15 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-67/69 25/2 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER  EF-16 LOWER LEVEL - EXHAUST 1 120/1 16 LA-71 30/1 2 #10, 1 #10G, 3/4" C MANUAL MOTOR STARTER  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2 #12, 1 #12G, 3/4" C MANUAL MOTOR STARTER	EF-08	SW DORM - EXHAUST	1/4	120/1	5.8	LD-18	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-11 STAFF RR - EXHAUST (54) 120/1 0.55  EF-12 STAFF RR - EXHAUST (42) 120/1 0.45  EF-13 SE RR - EXHAUST (42) 120/1 5.8 LD-24  EF-14 STAFF RR - EXHAUST (80) 120/1 1 ON LD-26  EF-15 LOWER LEVEL - EXHAUST 2 208/1 13.2 LA-67/69 25/2 2#12, 1 #12G, 3/4" C MANUAL MOTOR STARTER LA-67/18  EF-16 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2#12, 1 #12G, 3/4" C MANUAL MOTOR STARTER LA-67/18  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2#12, 1 #12G, 3/4" C 2P/30A/25AF/1R  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2#10, 1 #10G, 3/4" C MANUAL MOTOR STARTER LA-67/18  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2#12, 1 #12G, 3/4" C MANUAL MOTOR STARTER LA-67/18  EF-17 LOWER LEVEL - EXHAUST (80) 120/1 1 ON LD-26 2#12, 1 #12G, 3/4" C MANUAL MOTOR STARTER	EF-09	SW RR / SHOWER - EXHAUST	1/4	120/1	5.8	LD-20	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-12       STAFF RR - EXHAUST       (42)       120/1       0.45       LD-32       15/1       2 #12, 1 #12G, 3/4" C       MANUAL MOTOR STARTER         EF-13       SE RR - EXHAUST       1/4       120/1       5.8       LD-24       15/1       2 #12, 1 #12G, 3/4" C       MANUAL MOTOR STARTER         EF-14       STAFF RR - EXHAUST       (80)       120/1       1       ON LD-26       15/1       2 #12, 1 #12G, 3/4" C       MANUAL MOTOR STARTER         EF-15       LOWER LEVEL - EXHAUST       2       208/1       13.2       LA-67/69       25/2       2 #12, 1 #12G, 3/4" C       2P/30A/20AF/1R         EF-16       LOWER LEVEL - EXHAUST       1       120/1       16       LA-71       30/1       2 #10, 1 #10G, 3/4" C       MANUAL MOTOR STARTER         EF-17       LOWER LEVEL - EXHAUST       (80)       120/1       1       ON LD-26       2 #12, 1 #12G, 3/4" C       MANUAL MOTOR STARTER	EF-10	SE RR / SHOWER - EXHAUST	1/4	120/1	5.8	LD-22	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-12         STAFF RR - EXHAUST         (42)         120/1         0.45         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-13         SE RR - EXHAUST         1/4         120/1         5.8         LD-24         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-14         STAFF RR - EXHAUST         (80)         120/1         1         ON LD-26         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-15         LOWER LEVEL - EXHAUST         2         208/1         13.2         LA-67/69         25/2         2 #12, 1 #12G, 3/4" C         2P/30A/20AF/1R           EF-16         LOWER LEVEL - EXHAUST         1         120/1         16         LA-71         30/1         2 #10, 1 #10G, 3/4" C         MANUAL MOTOR STARTER           EF-17         LOWER LEVEL - EXHAUST         (80)         120/1         1         ON LD-26         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER	EF-11	STAFF RR - EXHAUST	(54)	120/1	0.55	1.0.22	45/4	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-14         STAFF RR - EXHAUST         (80)         120/1         1         ON LD-26         15/1         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER           EF-15         LOWER LEVEL - EXHAUST         2         208/1         13.2         LA-67/69         25/2         2 #12, 1 #12G, 3/4" C         2P/30A/20AF/1R           EF-16         LOWER LEVEL - EXHAUST         1         120/1         16         LA-71         30/1         2 #10, 1 #10G, 3/4" C         1P/30A/25AF/1R           EF-17         LOWER LEVEL - EXHAUST         (80)         120/1         1         ON LD-26         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER	EF-12	STAFF RR - EXHAUST	(42)	120/1	0.45	LD-32	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-15         LOWER LEVEL - EXHAUST         2         208/1         13.2         LA-67/69         25/2         2 #12, 1 #12G, 3/4" C         2P/30A/20AF/1R           EF-16         LOWER LEVEL - EXHAUST         1         120/1         16         LA-71         30/1         2 #10, 1 #10G, 3/4" C         1P/30A/25AF/1R           EF-17         LOWER LEVEL - EXHAUST         (80)         120/1         1         ON LD-26         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER	EF-13	SE RR - EXHAUST	1/4	120/1	5.8	LD-24	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-15         LOWER LEVEL - EXHAUST         2         208/1         13.2         LA-67/69         25/2         2 #12, 1 #12G, 3/4" C         2P/30A/20AF/1R           EF-16         LOWER LEVEL - EXHAUST         1         120/1         16         LA-71         30/1         2 #10, 1 #10G, 3/4" C         1P/30A/25AF/1R           EF-17         LOWER LEVEL - EXHAUST         (80)         120/1         1         ON LD-26         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER	EF-14	STAFF RR - EXHAUST	(80)	120/1	1	ON LD-26	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
EF-16         LOWER LEVEL - EXHAUST         1         120/1         16         LA-71         30/1         2 #10, 1 #10G, 3/4" C         1P/30A/25AF/1R           EF-17         LOWER LEVEL - EXHAUST         (80)         120/1         1         ON LD-26         2 #12, 1 #12G, 3/4" C         MANUAL MOTOR STARTER	EF-15	LOWER LEVEL - EXHAUST		208/1	13.2	LA-67/69	25/2	2 #12, 1 #12G, 3/4" C	2P/30A/20AF/1R
	EF-16	LOWER LEVEL - EXHAUST	1	120/1	16	LA-71	30/1	2 #10, 1 #10G, 3/4" C	1P/30A/25AF/1R
	EF-17	LOWER LEVEL - EXHAUST	(80)	120/1	1	ON LD-26		2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTER
	EF-18	MECH ROOM 2014 EXHAUST		120/1	9.8	LD-48	20/1	2 #12, 1 #12G, 3/4" C	1P/30A/20AF/3R

ITEM	SEDVES/LOCATION	E	LECTRICA	L	CIDCUIT	C/D	WIDE & CONDUIT	DISCONNECT
I I EIVI	SERVES/LOCATION	KW	V/PH	MOCP	CIRCUIT	C/B	WIRE & CONDUIT	
UH-01	MECHANICAL 2014	HYDRONIC	120/1	15	LD-34	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTE
UH-02	MECH/ELEC 1027	HYDRONIC	120/1	15			2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTE
UH-03	VEHICLE SALLY PORT 1001	HYDRONIC	120/1	15			2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTE
UH-04	VEHICLE SALLY PORT 1001	HYDRONIC	120/1	15	LB-60	15/1	2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTE
UH-05	VEHICLE SALLY PORT 1001	HYDRONIC	120/1	15			2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTE
UH-06	FIRE ROOM 1025	HYDRONIC	120/1	15			2 #12, 1 #12G, 3/4" C	MANUAL MOTOR STARTE
UH-07	LEVEL 1	3	277/1	15	HC-37	15/1	2 #12, 1 #12G, 3/4" C	1P/15A SWITCH
UH-08	LEVEL 1	3	277/1	15	HC-39	15/1	2 #12, 1 #12G, 3/4" C	1P/15A SWITCH
UH-09	BOILER 2023	20	480/3	30	HC-43/45/47	30/3	3 #10, 1 #10G, 3/4" C	3P/30A/30AF/1R
UH-10	ALTERNATE #1	3	277/1	15	HC-41	15/1	2 #12, 1 #12G, 3/4" C	1P/15A SWITCH
UH-11	ALTERNATE #1	3	277/1	15	HC-49	15/1	2 #12, 1 #12G, 3/4" C	1P/15A SWITCH
UH-12	ALTERNATE #1	3	277/1	15	HC-51	15/1	2 #12, 1 #12G, 3/4" C	1P/15A SWITCH
UH-13	STAIR ST-03	4.8	277/1	20	HB-26	20/1	2 #12, 1 #12G, 3/4" C	1P/20A SWITCH
UH-14	STAIR ST-02	4.8	277/1	20	HB-28	20/1	2 #12, 1 #12G, 3/4" C	1P/20A SWITCH
UH-15	STAIR ST-01	4.8	277/1	20	HB-30	20/1	2 #12, 1 #12G, 3/4" C	1P/20A SWITCH
UH-16	LOWER LEVEL	3	277/1	15	HB-32	15/1	2 #12, 1 #12G, 3/4" C	1P/15A SWITCH
UH-17	LOWER LEVEL	$\sim$	277/1	15~	HB-34	15/1	2 #12 1 #12G, 3/4" C	1P/15A SWITCH

				Pl	JMP SCHE	DULE			
ITEM	SERVES		ELEC	CTRICAL		CIRCUIT	C/B	WIRE & CONDUIT	DISCONNECT
I I LIVI	SERVES	HP	V/PH	MCA	MOCP	CINCOTT	C/B	WINE & CONDOTT	DISCONNECT
CHWP-1	CHILLED WATER	15	480/3	27	40	HB-14/16/18	40/3	3 #10, 1 #10G, 3/4" C	3P/60A/35AF/1R
CHWP-2	CHILLED WATER	15	480/3	27	40	HB-20/22/24	40/3	3 #10, 1 #10G, 3/4" C	3P/60A/35AF/1R
HHWP-1	HOT WATER	7.5	480/3	11	20	HC-25/27/29	20/3	3 #12, 1 #12G, 3/4" C	3P/30A/17.5AF/1F
HHWP-2	HOT WATER	7.5	480/3	11	20	HC-31/33/35	20/3	3 #12, 1 #12G, 3/4" C	3P/30A/17.5AF/1F

			LOU	IVER SCH	EDULE			
ITEM	SERVES		ELECTRICA	L	CIDCUIT	C/B	WIRE & CONDUIT	DISCONNECT
I I EIVI	SERVES	V/PH	MCA	MOCP	CIRCUIT	C/B	WIRE & CONDUIT	DISCONNECT
L1	VEHICLE SALLY PORT	120/1	1	15			2 #12, 1 #12G, 3/4" C	1P SWITCH
L2	VEHICLE SALLY PORT	120/1	1	15	LB-61	15/1	2 #12, 1 #12G, 3/4" C	1P SWITCH
L3	VEHICLE SALLY PORT	120/1	1	15			2 #12, 1 #12G, 3/4" C	1P SWITCH
L-25	LOWER LEVEL, NORTH WALL	120/1	1	15	LA-50	15/1	2 #12, 1 #12G, 3/4" C	1P SWITCH

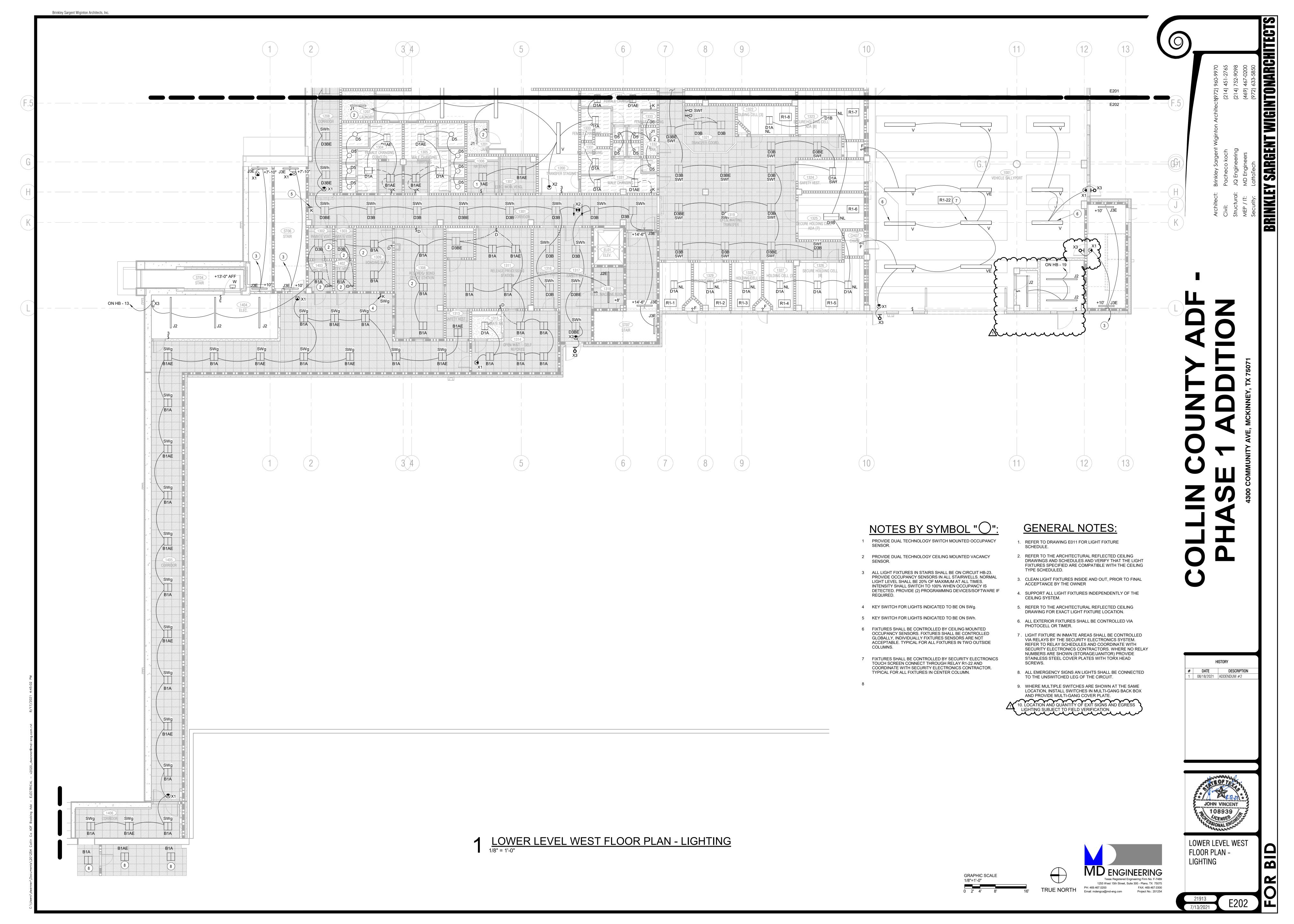
			M	<b>OTORIZE</b>	D DAMPE	R SCHEDULE	<b>-</b>		
ITEM	SERVES	ZONE	I	ELECTRICA	L	CIRCUIT	C/B	WIRE & CONDUIT	DISCONNECT
I I CIVI	SERVES	ZONE	V/PH	MCA	MOCP	CIRCUIT	C/B	WIRE & CONDOIT	DISCONNECT
M-1A	AHU-I-1	5	120/1	0.6	15				
M-1B	AHU-I-1	5	120/1	0.6	15	ON LC-67	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE
M-1C	AHU-I-1	5	120/1	0.6	15	ON LC-07	13/1	2 #12, 1 #12G, 3/4 C	RECEPTAGLE
M-1D	SSF-05	5	120/1	0.6	15				
M-2A	AHU-I-2	6	120/1	0.6	15				
M-2B	AHU-I-2	6	120/1	0.6	15	ON LC-69	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE
M-2C	AHU-I-2	6	120/1	0.6	15	ON LC-09	15/1	2 #12, 1 #12G, 3/4 C	RECEPTACLE
M-2D	SSF-06	6	120/1	0.6	15				
M-3A	AHU-I-3	7	120/1	0.6	15				
M-3B	AHU-I-3	7	120/1	0.6	15	ON LC-71	15/1	2 #42 4 #420 2/4" 0	DECEDIACIE
M-3C	AHU-I-3	7	120/1	0.6	15	ON LC-71	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE
M-3D	SSF-07	7	120/1	0.6	15				
M-6A	AHU-I-6	3	120/1	0.6	15				
M-6B	SEF-03	3	120/1	0.6	15				
M-6C	AHU-I-6	3	120/1	0.6	15	ON LD-36	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE
M-6D	SSF-03A / SSF-03B / SSF-03C	-3-C	120/1	0.6					
M-6D M-6E	AHU-I-6	3	120/1	0.6	15	)			
M-7A	SSF-02		120/1	0.6	15				
M-7B	AHU-I-7	2	120/1	0.6	15				
M-7C	AHU-I-7	2	120/1	0.6	15	ON LD-38	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE
M-7D	SEF-02	2	120/1	0.6	15				
M-7E	AHU-I-7	2	120/1	0.6	15				
M-8A	SSF-01	1	120/1	0.6	15				
M-8B	AHU-I-8	1	120/1	0.6	15	ONLD 40	4514	0.440.4.4400.0441.0	DECEDIACIE
M-8C	AHU-L8	-0-0-0	120/1	0.6		ON LD-40	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE
M-8D	AHU-I-8	1, 1,	120/1	0.6	15	)			
M-9A	AHU-1-9		120/1		<del></del>				
M-9B	SEF-04	4	120/1	0.6	15				
M-9C	AHU-I-9	4	120/1	0.6	15	ON LD-42	15/1	2 #12, 1 #12G, 3/4" C	RECEPTACLE
M-9D	SSF-04	4	120/1	0.6	_ 15 _				

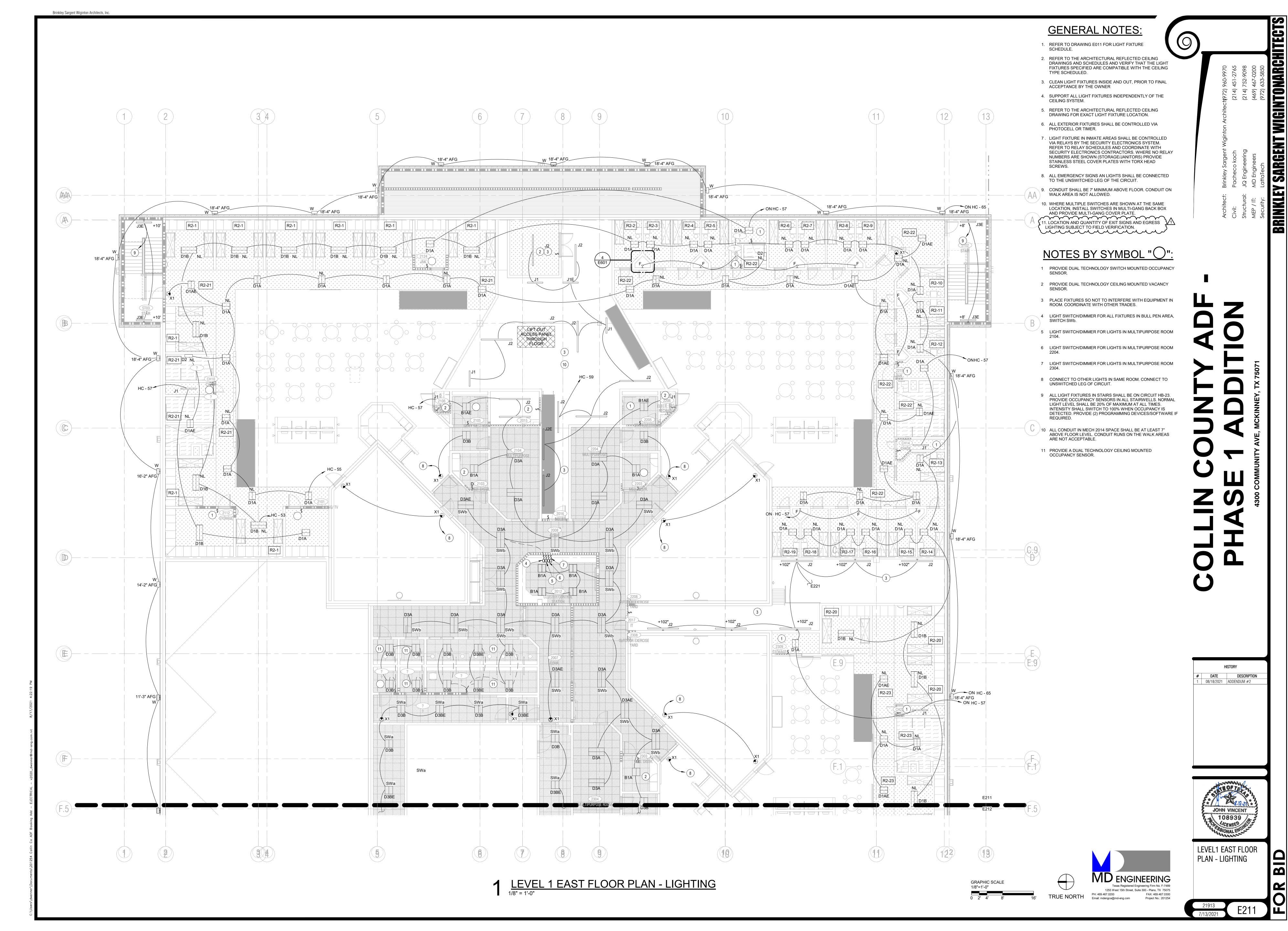


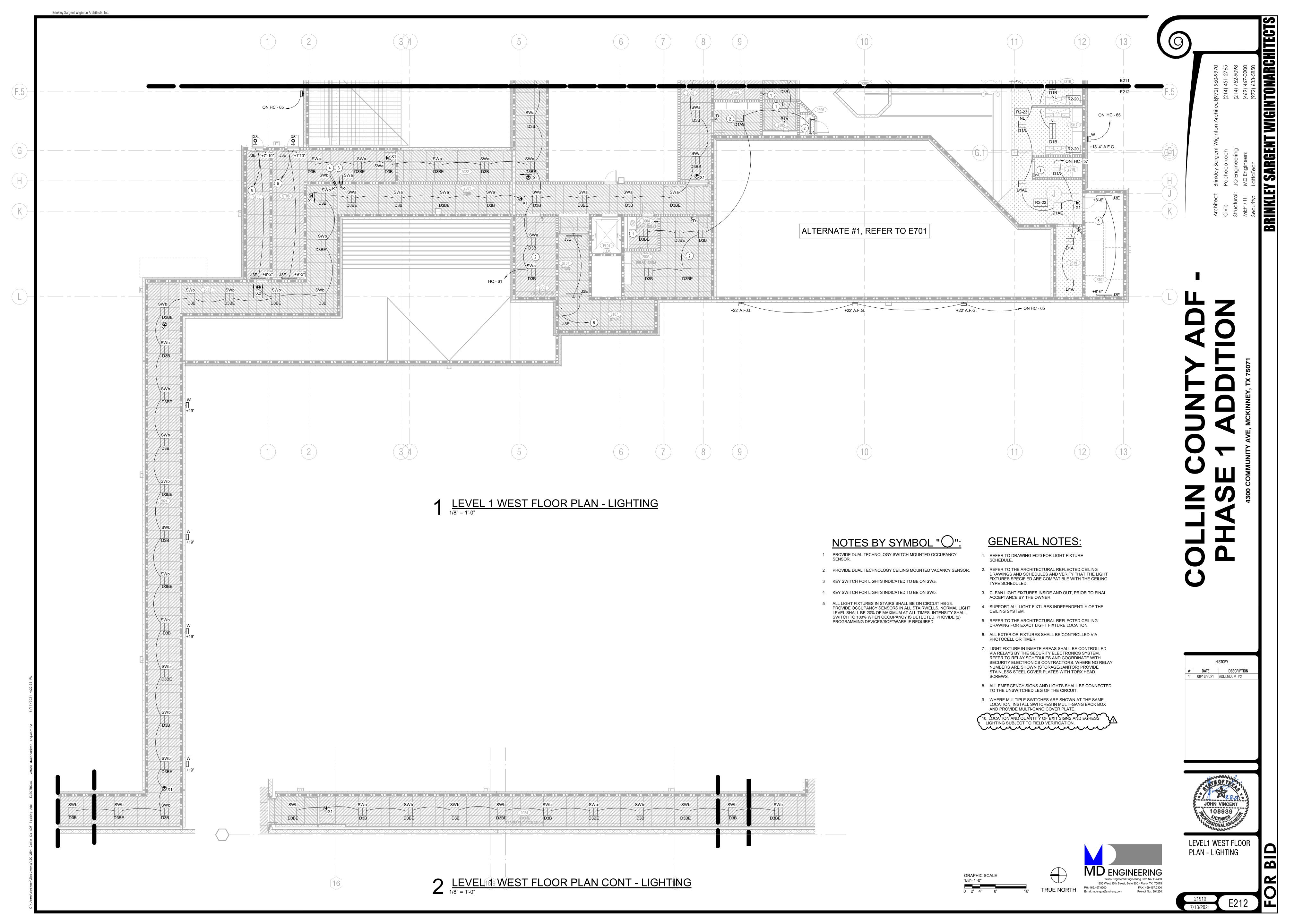
LOWER LEVEL EAST FLOOR PLAN -LIGHTING

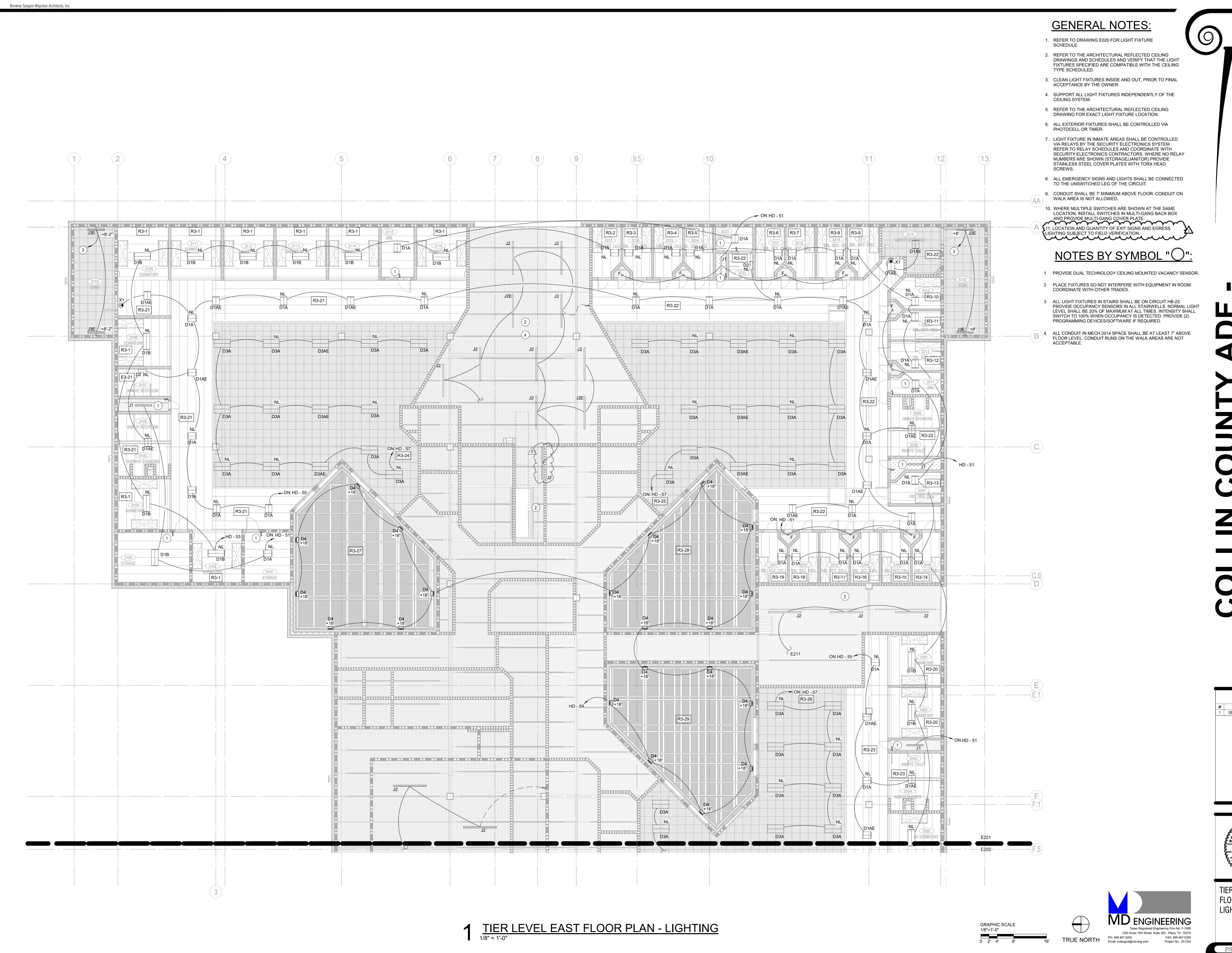
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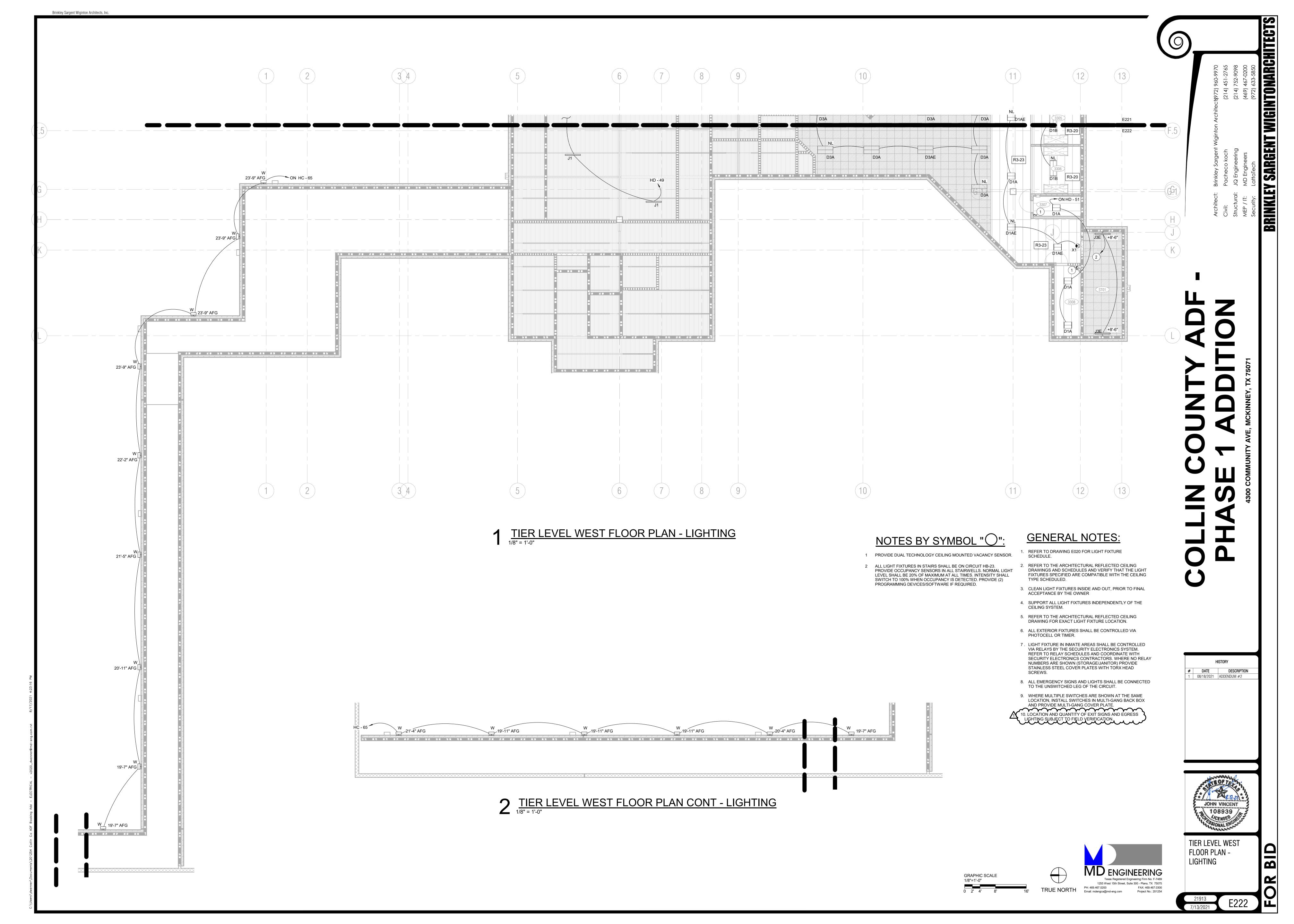
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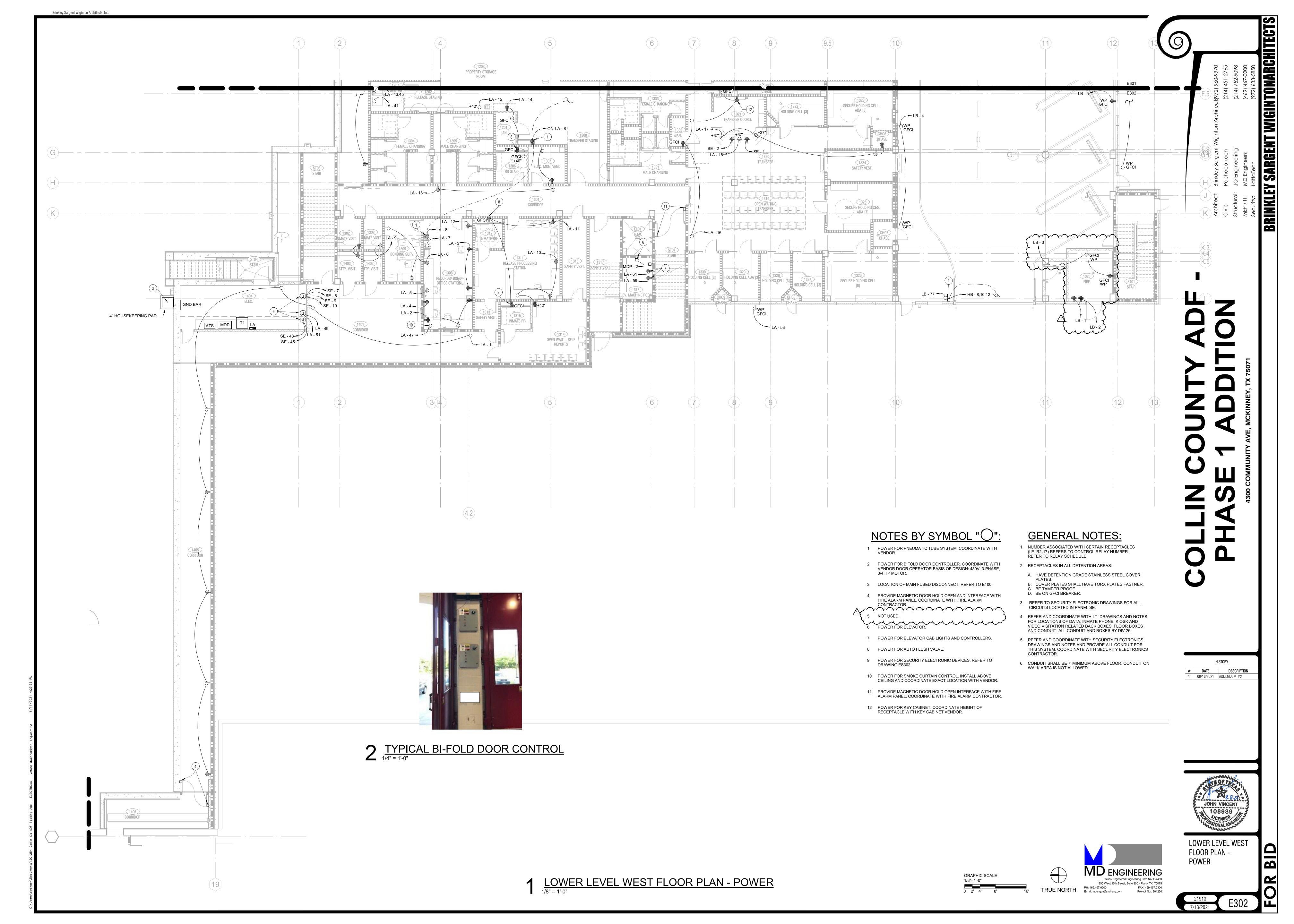
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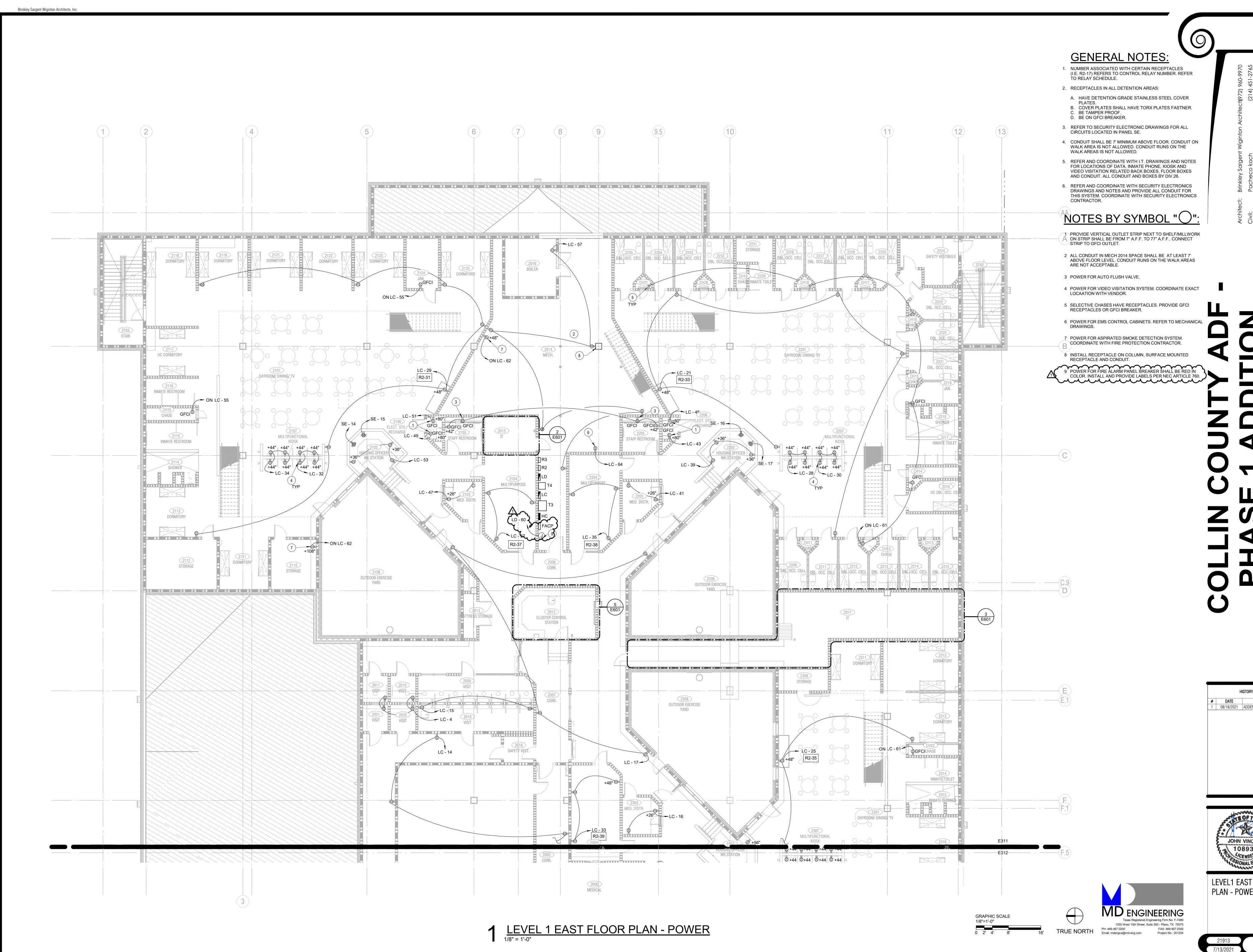


TIER LEVEL EAST FLOOR PLAN -

LIGHTING



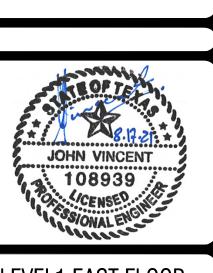




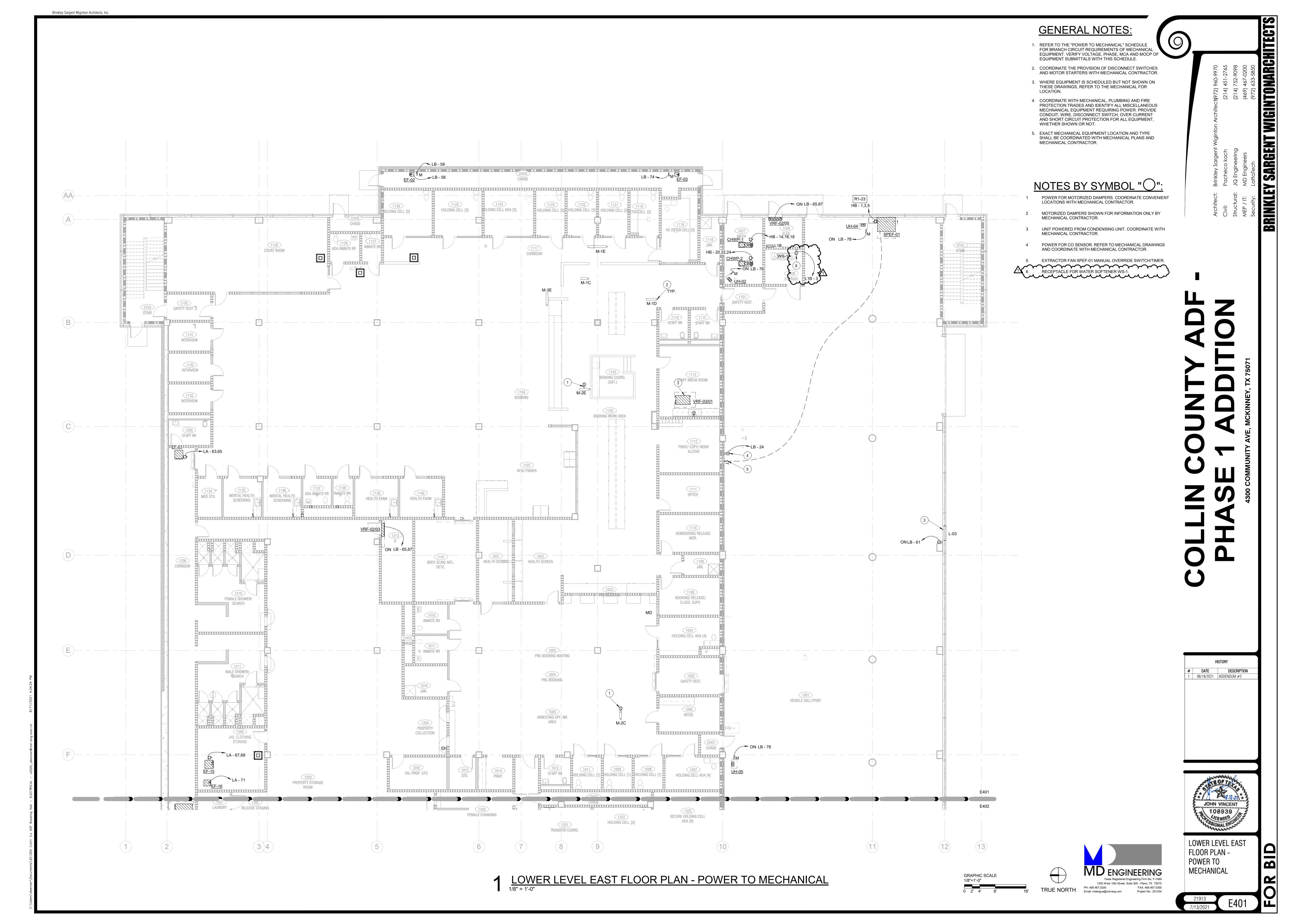
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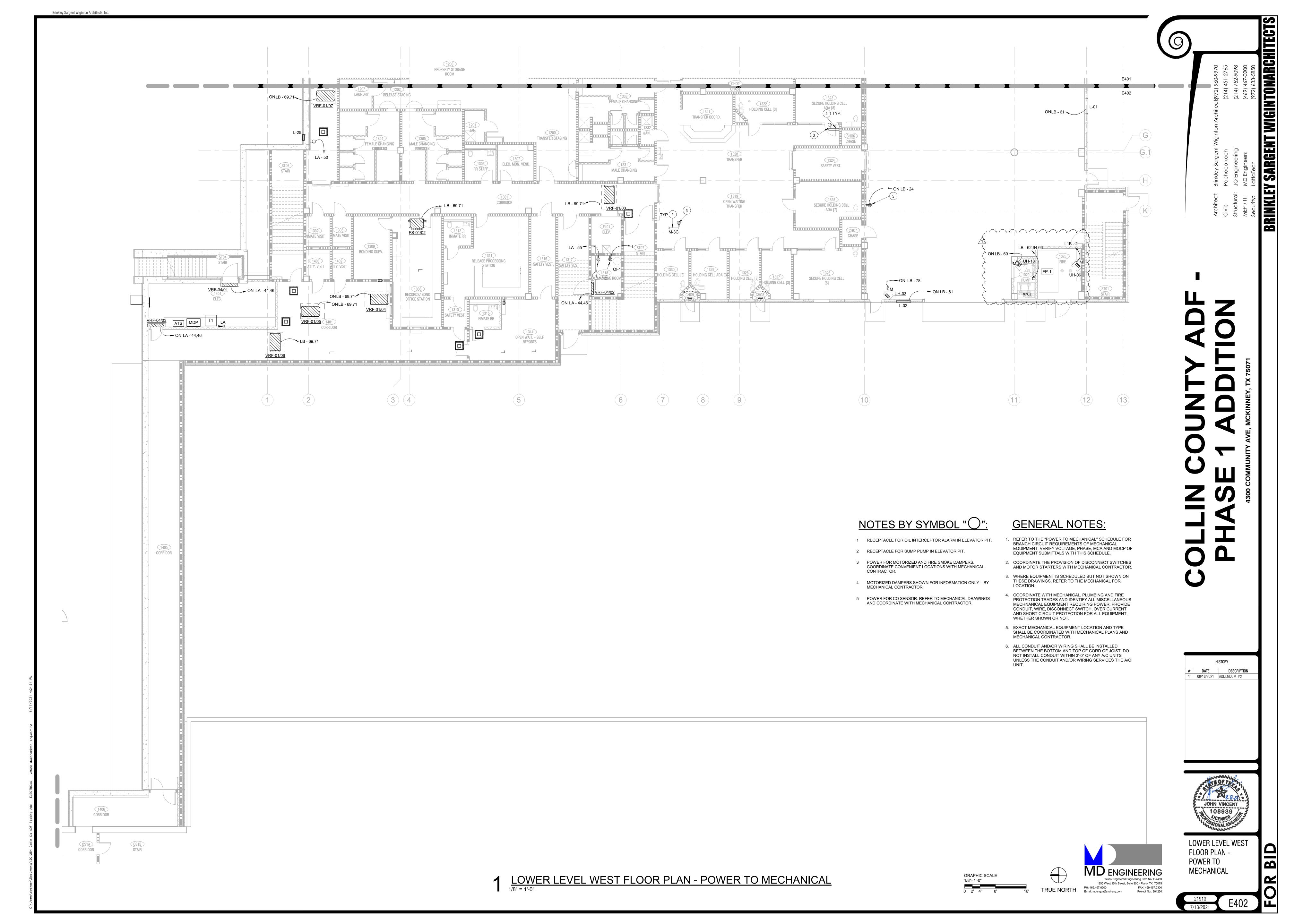
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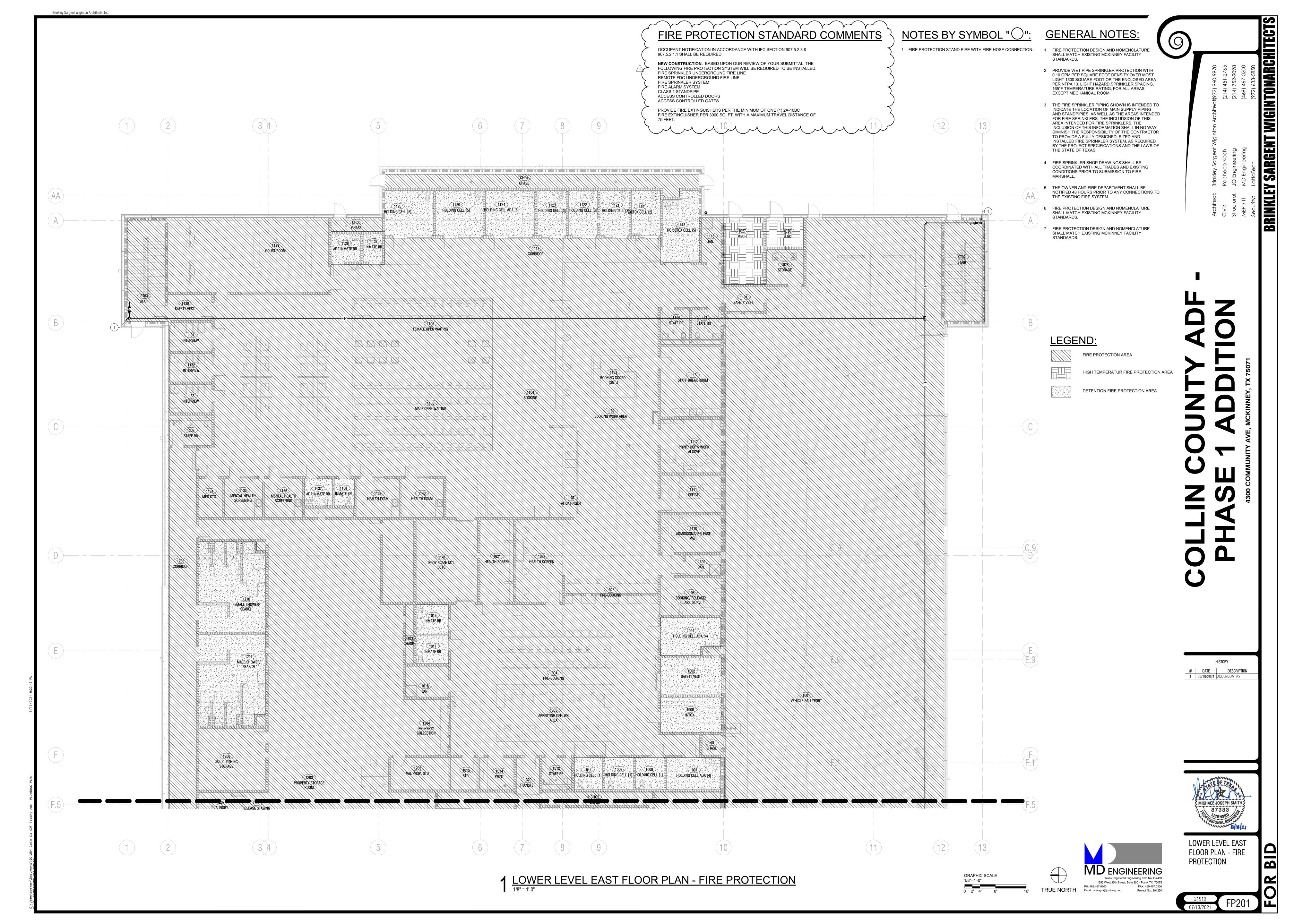
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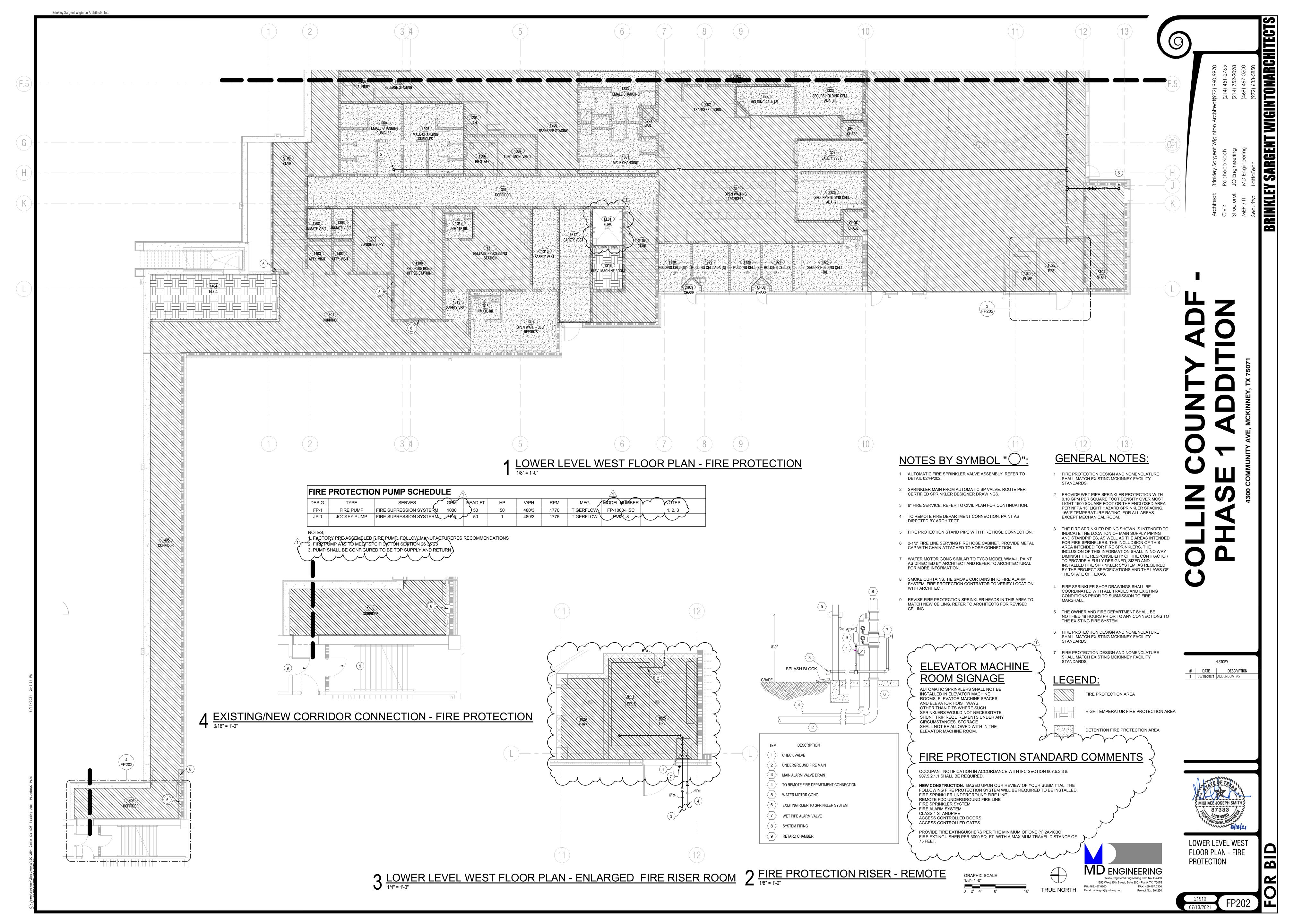


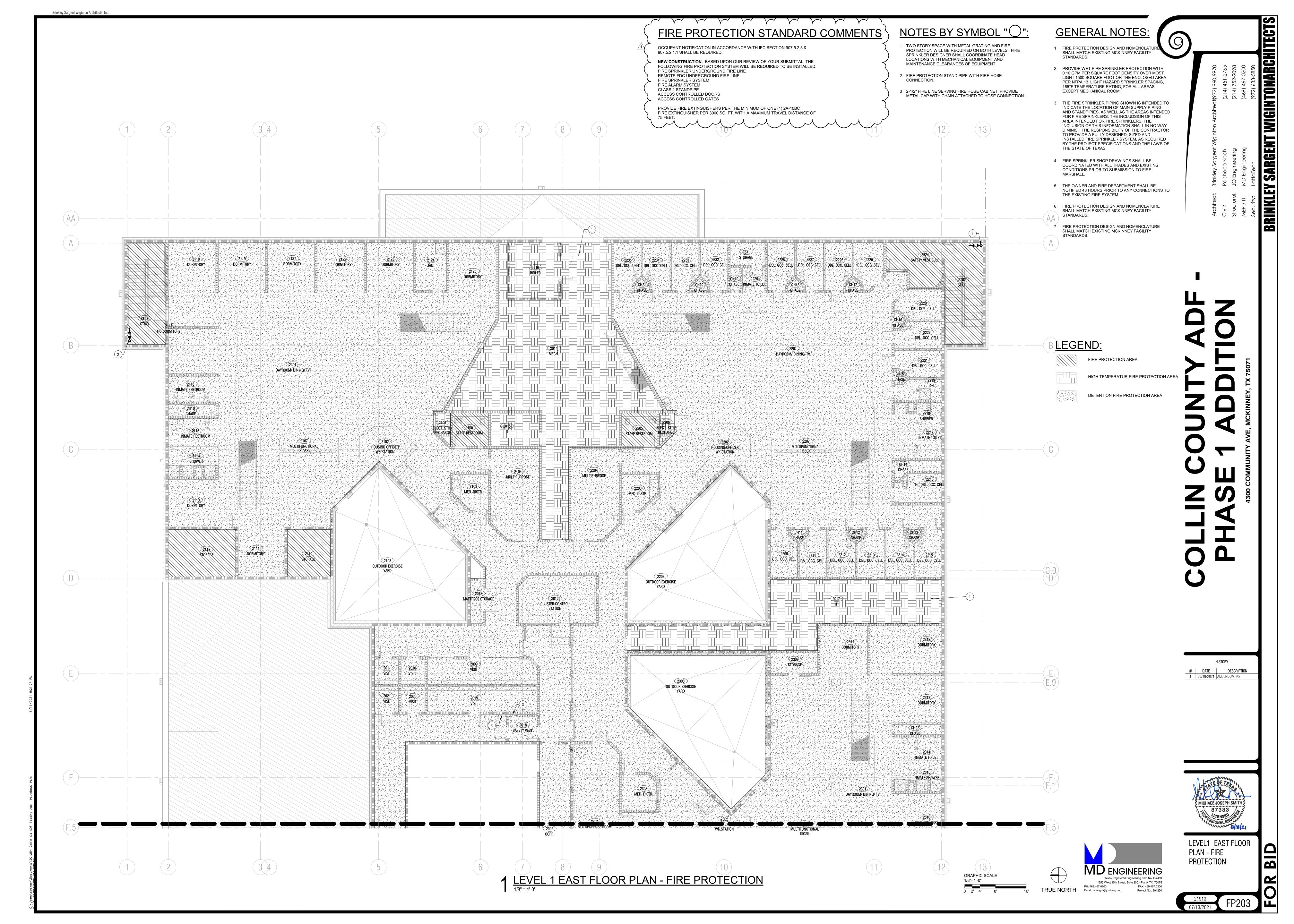
LEVEL1 EAST FLOOR PLAN - POWER

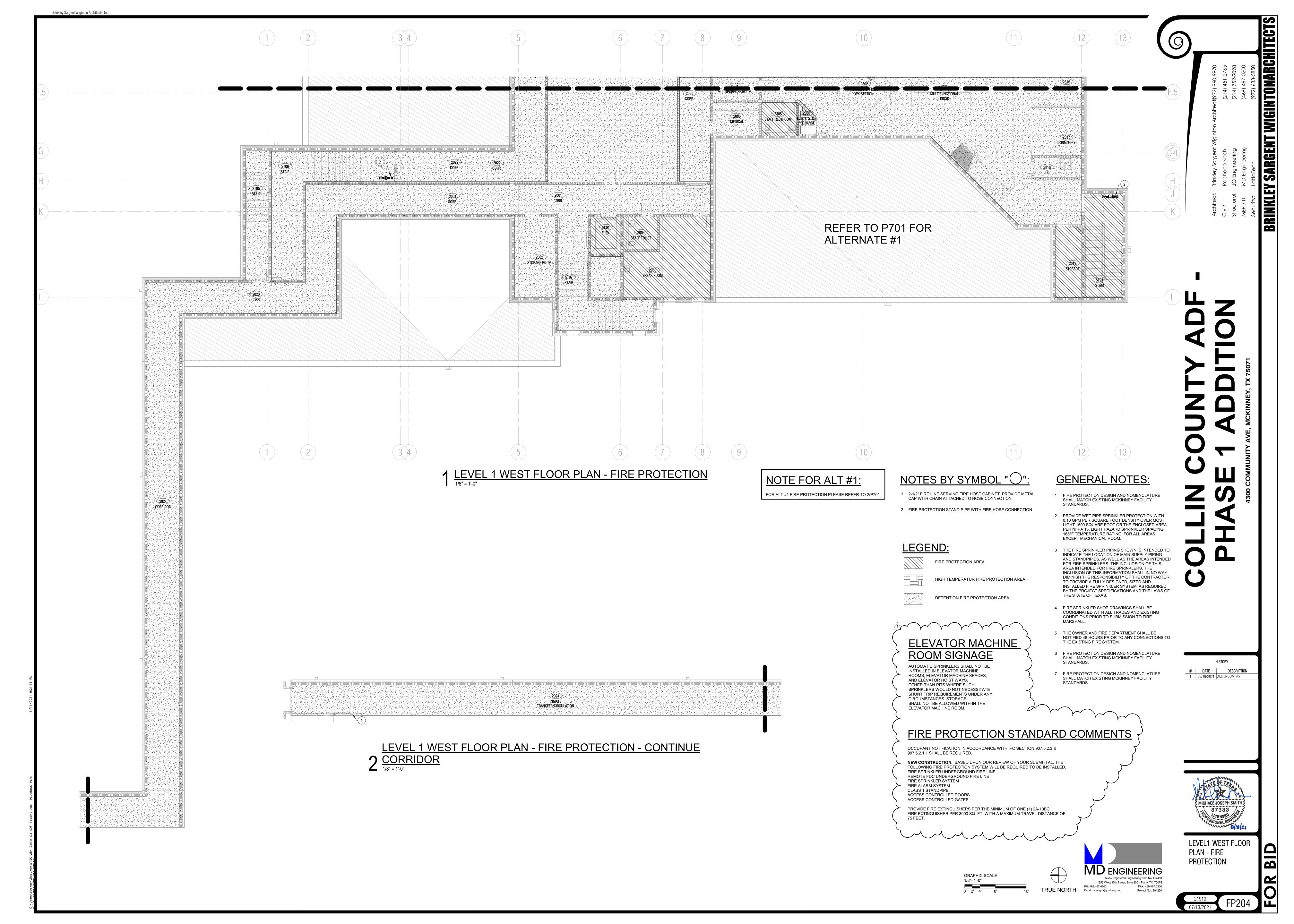


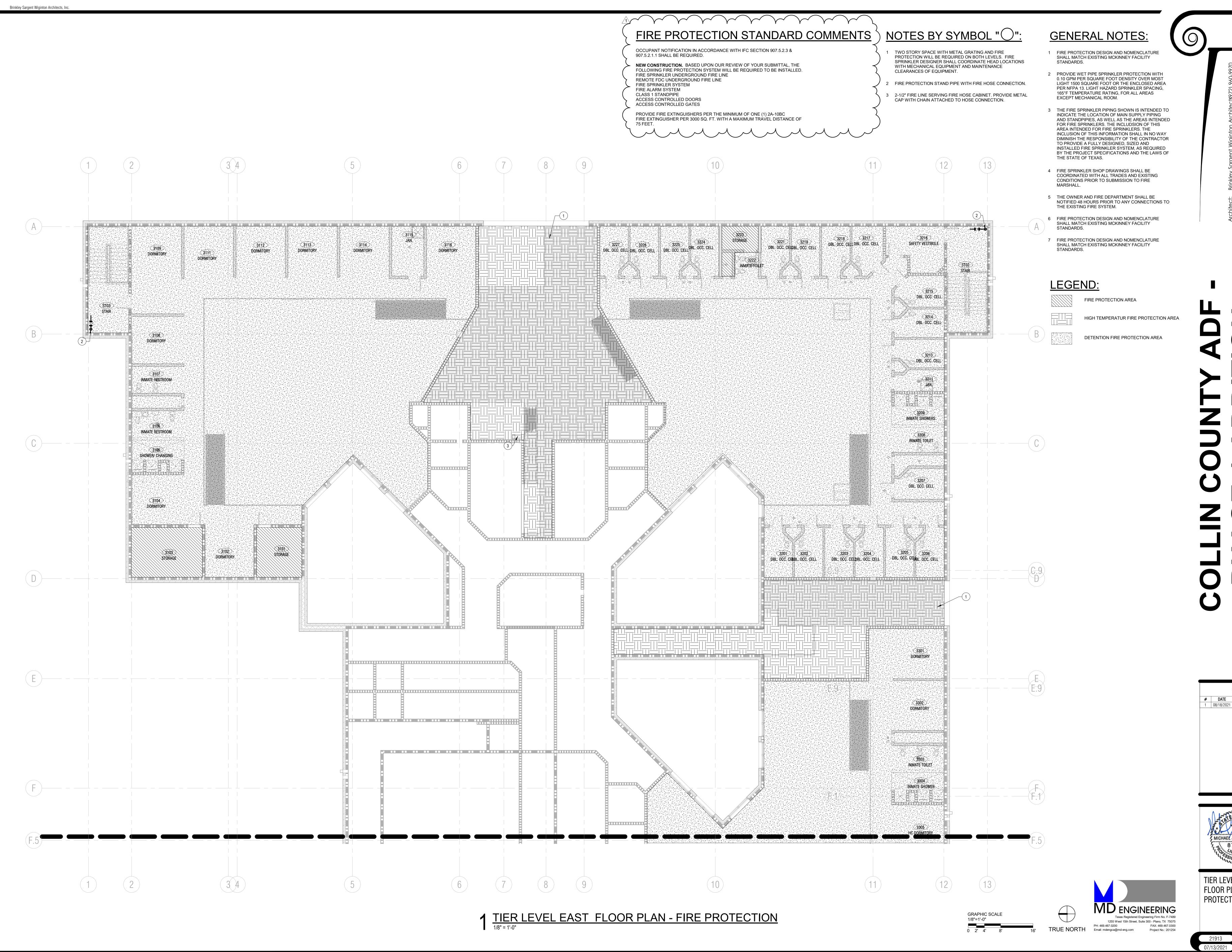






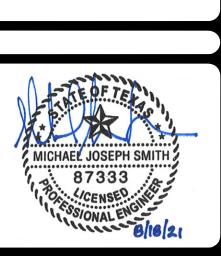




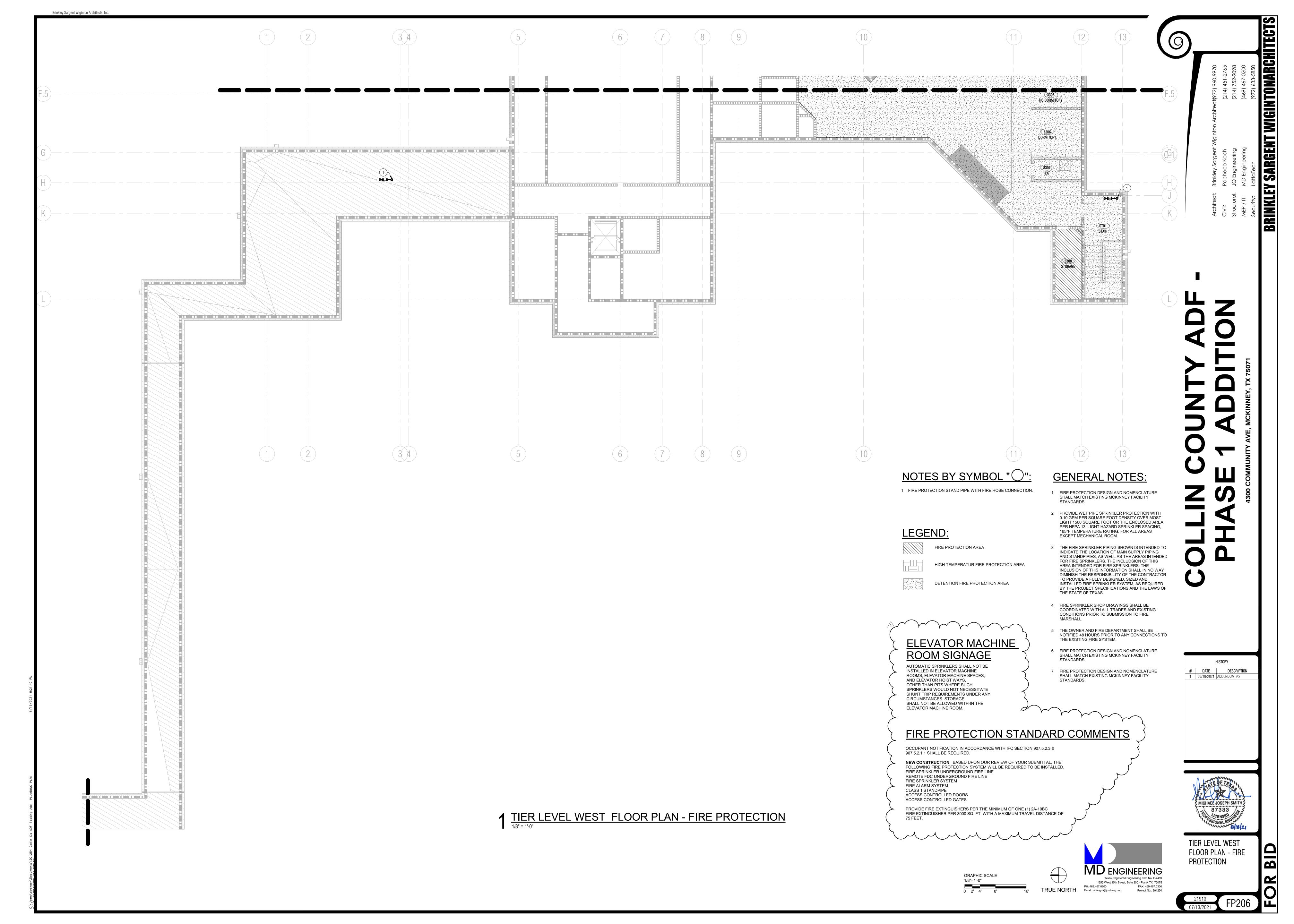


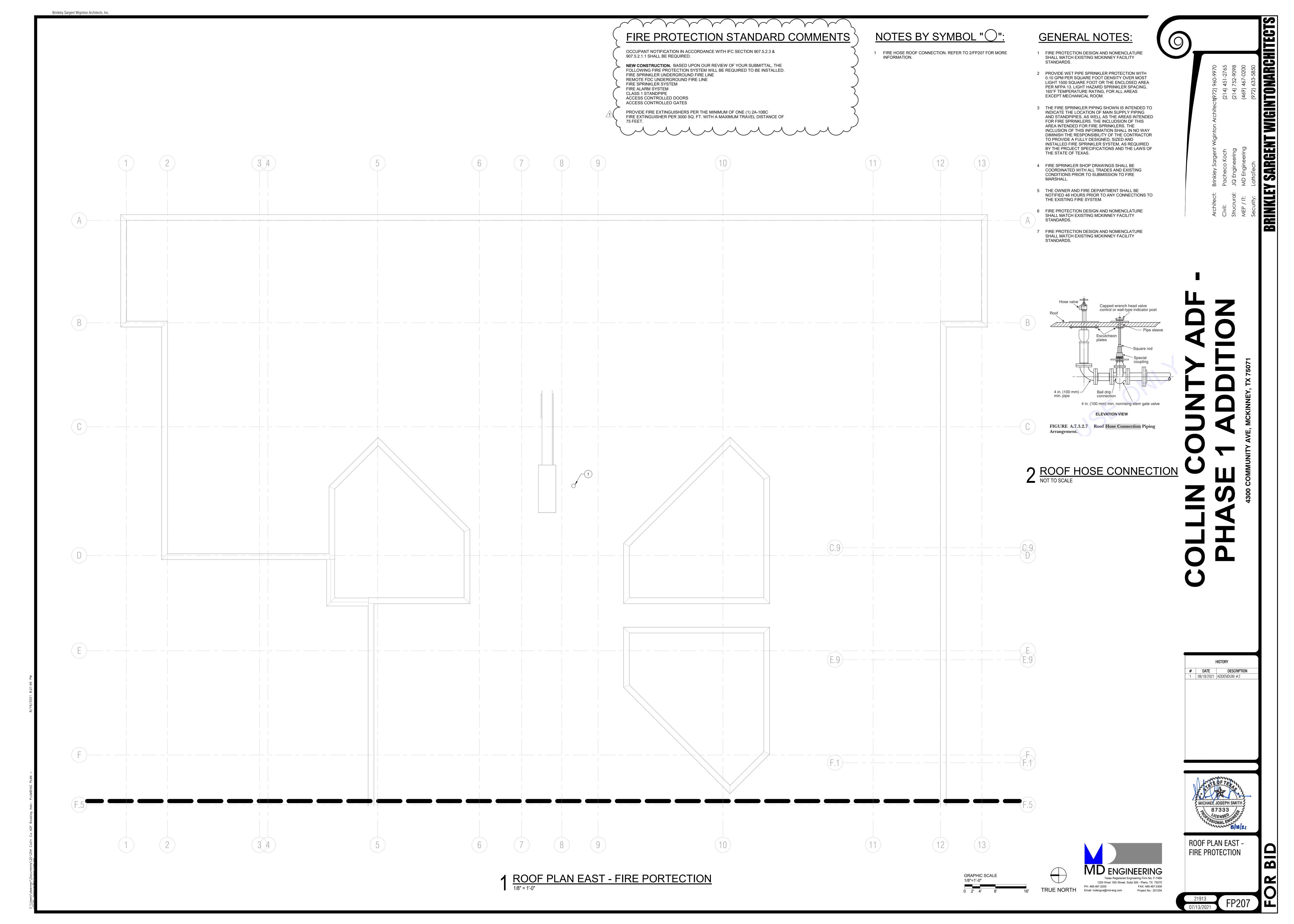
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# DATE DESCRIPTION
1 08/18/2021 ADDENDUM #2



TIER LEVEL EAST FLOOR PLAN - FIRE PROTECTION





MARK	SERVICES	MAXIMUM	MIN. PERIMETER INTAKE AREA	MAX P.D.	MIN. THROAT AREA	DUCT SIZE	ELEC	MANUFACTURER	MODEL NO.	OP. WEIGHT	REMARKS
		CFM	(SQ. FT)	(W.G.)	(SQ. FT)					(>200 LBS.)	
VH-A	RELIEF	200		0.05	0.37	8"	-	GREENHECK	GRSR		SEE NOTES 1 - 4
VH-B	INTAKE	450		0.05	0.82	12"	Y	GREENHECK	GRSI		SEE NOTES 1, 3 - 5

1. PROVIDE BIRD SCREEN

2. PROVIDE COUNTERED WEIGHTED BACKDRAFT DAMPER WITH FELTED BLADE STRIKES.

3. PROVIDE MANUFACTURERS ROOF CURB - 12" HIGH ABOVE FINISHED ROOF. NO CURB SLOPE- MOUNT PARALLEL TO ROOF ANGLE.

4. MULTIPLE UNITS HAVE THE SAME DESIGNATION. VERIFY EXACT NUMBER OF UNITS WITH THE FLOOR PLANS. ALL MARKS MAY NOT BE UTILIZED. 5. OUTSIDE AIR APPLICATIONS SHALL HAVE 2 POSITION ACTUATORS (120V/1PH - N.C.) BY HOOD MANUFACTURER. END SW. BY CONTROLS CONTRACTOR. LOUVER SCHEDULE

DESIG.	TYPE	LOCATION	CFM	THROAT WIDTH	THROAT HEIGHT	THROAT FREE	MAX VELOCITY	AIR PD	ELEC	FINISH	MFG.	MODEL	DEMARKS
DESIG.	TIPE	LOCATION	CFIVI	(IN)	(IN)	AREA (SF)	(FPM)	(IN.W.G.)	ELEC	FINISH	WFG.	NUMBER	REMARKS
L-1	COMBINATION DRAINABLE	SALLY PORT	6,440	46	64	8.38	768	0.07	Υ	PER ARCH	GREENHECK	EACC-601	SEE NOTES 1-4, 7
L-2	COMBINATION DRAINABLE	SALLY PORT	6,440	46	64	8.38	768	0.07	Υ	PER ARCH	GREENHECK	EACC-601	SEE NOTES 1-4, 7
L-3	COMBINATION DRAINABLE	SALLY PORT	6,440	46	64	8.38	768	0.07	Υ	PER ARCH	GREENHECK	EACC-601	SEE NOTES 1-4, 7
L-4	FIXED BLADE DRAINABLE	TIER LEVEL - SOUTH WALL	29,070	66	136	35.29	915	0.14	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3
L-5	FIXED BLADE DRAINABLE	TIER LEVEL - SOUTH WALL	6,460	66	40	9.65	670	0.07	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3
L-6	FIXED BLADE DRAINABLE - INACTIVE	TIER LEVEL - SOUTH WALL	-	66	96	24.54	-	-	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 5
L-7	FIXED BLADE DRAINABLE	LEVEL 1 - EAST WALL	19,855	72	96	26.91	738	0.09	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3
L-8	FIXED BLADE DRAINABLE - INACTIVE	LEVEL 1 - EAST WALL	-	72	96	26.91	-	-	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 5
L-9	FIXED BLADE DRAINABLE	LEVEL 1 - EAST WALL	-	60	96	22.16	-	-	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3
L-10	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	3,395	60	80	4.30	790	0.10	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 6
L-11	FIXED BLADE DRAINABLE - INACTIVE	TIER LEVEL - EAST WALL	-	72	80	22.38	-	-	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 5, 8
L-12	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	3,395	60	80	4.30	790	0.10	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 6, 8
L-13	FIXED BLADE DRAINABLE - INACTIVE	TIER LEVEL - EAST WALL	-	60	80	18.43	-	-	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 5
L-14	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	3,395	60	80	4.30	790	0.10	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 6
L-15	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	17,210	60	80	18.43	934	0.15	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3
L-16	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	17,210	72	80	22.38	769	0.10	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 8
L-17	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	17,210	60	80	18.43	934	0.15	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 8
L-18	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	17,210	60	80	18.43	934	0.15	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3
L-19	FIXED BLADE DRAINABLE	TIER LEVEL - EAST WALL	17,210	60	80	18.43	934	0.15	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3
L-20	FIXED BLADE DRAINABLE	LOWER LEVEL - EAST WALL	100	12	16	0.47	215	0.01	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 7
L-21	FIXED BLADE DRAINABLE	LOWER LEVEL - NORTH WALL	3,680	34	32	3.65	1,009	0.16	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 7
L-22	FIXED BLADE DRAINABLE	LOWER LEVEL - EAST WALL	100	12	16	0.47	215	0.01	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 7
L-23	FIXED BLADE DRAINABLE	LOWER LEVEL - EAST WALL	400	12	16	0.47	859	0.12	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 7
L-24	FIXED BLADE DRAINABLE	SALLY PORT	19,310	56	56	0.59	1,459	0.29	-	PER ARCH	GREENHECK	ESD-601	SEE NOTES 1-3, 7
L-25	COMBINATION DRAINABLE	LOWER LEVEL - NORTH WALL	570	20	32	0.94	609	0.05	Υ	PER ARCH	GREENHECK	EACC-601	SEE NOTES 1- 4, 7
L-26	FIXED BLADE DRAINABLE	LOWER LEVEL - NORTH WALL	4,710	44	32	4.69	1,005	0.16	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3, 7
L-27	FIXED BLADE DRAINABLE	LEVEL 1 - NORTH WALL	135	12	16	0.47	290	0.01	-	PER ARCH	GREENHECK	EDD-601	SEE NOTES 1-3

### NOTES:

1. PROVIDE BIRD SCREEN

2. PROVIDE KYNAR FINISH. COLOR PER ARCHITECTURAL RECOMMENDATIONS.

3. PROVIDE SHEET METAL SLEEVE FOR DUCT CONNECTION.

4. PROVIDE ENCLOSED ACTUATOR (120V/1PH), FRAME AND EXPANDED METAL SAFETY / SECURITY SCREEN.

5. LOUVER SHALL BE HINGED FRENCH DOOR WITH LOCKABLE HASP FOR ACCESS PATH FOR EQUIPMENT MAINTENANCE. PROVIDE INSULATED PANEL ON BACK SIDE OF INACTIVE SECTION. REFER TO DETAILS.

6. PROVIDE 60"X56" INSULATED BLANK OFF PLATE AT BOTTOM OF LOUVER FOR INACTIVE SECTION. SCHEDULED THROAT FREE AREA, VELOCITY, AND AIR PD SHALL BE PERFORMANCE OF ACTIVE LOUVER AREA.

7. PROVIDE SECURITY BARRIER AS DETAILS IN PLANS.

8. PROVIDE AND INSTALL PIECE OF METAL ON LOUVER TO MATCH LOCKABLE HASP FROM LOUVER BELOW.

MARK	LEVEL	SERVES	CFM	CAPACITY	ELEC. HEATING			HEATI	NG COIL DATA				FAN	DATA		MANUFACTURER	MODEL NO.	OP. WEIGHT	REMARKS
WARK	LEVEL	SERVES	CFIVI	(MBH)	COIL DATA (kW)	TOTAL MBH	EWT (F)	LWT (F)	AIR TEMP. RISE (F)	GPM	WPD.(FT)	HP	RPM	VOLTS	PHASE	MANUFACTURER	MODEL NO.	(>200 LBS.)	REMARKS
UH-01	LEVEL 1	MECH 2013	340	11.0	-	11.0	180	150.0	28	0.8	0.2	1 / 60	1550	115	1	MODINE	HC 18	-	REFER TO NOTES 1 - 5
UH-02	LOWER LEVEL	. MECH 1027	340	11.0	-	11.0	180	150.0	28	0.8	0.2	1 / 60	1550	115	1	MODINE	HC 18	-	REFER TO NOTES 1 - 5
UH-03	LOWER LEVEL	VEHICLE SALLYPORT - 1001	730	26.1	-	26.1	180	150.0	32	1.8	0.1	1 / 12	1550	115	1	MODINE	HC 47	-	REFER TO NOTES 1 - 5
UH-04	LOWER LEVEL	VEHICLE SALLYPORT - 1001	730	26.1	-	26.1	180	150.0	32	1.8	0.1	1 / 12	1550	115	1	MODINE	HC 47	-	REFER TO NOTES 1 - 5
UH-05	LOWER LEVEL	VEHICLE SALLYPORT - 1001	730	26.0	-	26.0	180	150.0	32	1.8	0.1	1 / 12	1550	115	1	MODINE	HC 47	-	REFER TO NOTES 1 - 5
UH-06	LOWER LEVEL	. FIRE - 1025	340	11.0	-	11.0	180	150.0	28	0.8	0.2	1 / 60	1550	115	1	MODINE	HC 18	-	REFER TO NOTES 1 - 5
UH-07	LEVEL 1	-	350	10.2	3	-	-	-	-	-	-	1/100	1600	277	1	QMARK	MUH-03	-	REFER TO NOTES 1 - 5
UH-08	LEVEL 1	-	350	10.2	3	-	-	-	-	-	-	1/100	1600	277	1	QMARK	MUH-03	-	REFER TO NOTES 1 - 5
UH-09	LEVEL 1	BOILER - 2023	1320	68.2	20	-	-	-	-	-	-	1/10	1500	480	3	QMARK	MUH-20	-	REFER TO NOTES 1 - 5
UH-10	LEVEL 1	ALTERNATE 1	350	10.2	3	-	-	-	-	-	-	1/100	1600	277	1	QMARK	MUH-03	-	REFER TO NOTES 1 - 6
UH-11	LEVEL 1	ALTERNATE 1	350	10.2	3	-	-	-	-	-	-	1/100	1600	277	1	QMARK	MUH-03	-	REFER TO NOTES 1 - 6
UH-12	LEVEL 1	ALTERNATE 1	350	10.2	3	-	-	-	-	-	-	1/100	1600	277	1	QMARK	MUH-03	-	REFER TO NOTES 1 - 6
UH-13	LOWER LEVEL	STAIR - ST03	100	16.4	4.8	-	-	-	-	-	-	5.3 W	1550	277	1	QMARK	AWH4507	-	REFER TO NOTES 2, 3, 7, 8, 9
UH-14	LOWER LEVEL	STAIR - ST02	100	16.4	4.8	-	-	-	-	-	-	5.3 W	1550	277	1	QMARK	AWH4507	-	REFER TO NOTES 2, 3, 7, 8, 9
UH-15	LOWER LEVEL	STAIR - ST01	100	16.4	4.8	-	-	-	-	-	-	5.3 W	1550	277	1	QMARK	AWH4507	-	REFER TO NOTES 2, 3, 7, 8, 9
UH-16	LOWER LEVEL	. CHASE - CH09	350	10.2	3	-	-	-	-	-	-	1/100	1600	277	1	QMARK	MUH-03	-	REFER TO NOTES 1 - 5
UH-17	LOWER LEVEL	CHASE - CH08	350	10.2	3	-				-		1/100	1600	277	1	QMARK	MUH-03		REFER TO NOTES 1 - 5

2. PROVIDE INTEGRAL CONTROL VOLTAGE TRANSFORMER, RELAYS AND CONTROLS FOR A SINGLE POINT ELECTRICAL CONNECTION.

3. PROVIDE TEMPERATURE OVER LIMIT PROTECTION. 4. PROVIDE MANUFACTURERS MOUNTING BRACKET.

5. UNLESS NOTED OTHERWISE, MOUNT HEATER 10'-0" AFF. CONTRACTOR TO INSTALL PER MANUFACTURERS RECOMMENDATIONS AND MAINTAIN ALL REQUIRED CLEARANCES.

6. ALTERNATE #1: PROVIDE EQUIPMENT WITHIN ALTERNATE #1.

7. PROVIDE 14 GAUGE SECURITY FRONT COVER.

8. PROVIDE RELAY TO INTEGRATE HEATER TO BMS. 9. PROVIDE MOUNTING FRAME FOR RECESSED INSTALLATION.

> Texas Registered Engineering Firm No. F-7489 1255 West 15th Street, Suite 300 - Plano, TX 75075 PH: 469.467.0200 FAX: 469.467.0300 Email: mdengca@md-eng.com Project No.: 201254

- REFER TO NOTES 1 - 5

# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2

MICHAEL JOSEPH SMITH

MECHANICAL SCHEDULES

								ELECT	RICAL	REGULATOR				
MARK	TYPE	GPM	EWT	LWT	INPUT	OUTPUT	FUEL	VOLTS	PHASE	INLET	MANUFACTURER	MODEL NO.	REMARKS	OPERATIN
			(F)	(F)	(MBH)	(MBH)		VOLIO	THACL	PRESS. (IN W.C.)				WEIGHT (LB
B-3	CONDENSING	75.0	140	180.0	1,500	1,443	NAT. GAS	120	1	8	LONCHINVAR	FBN 1501	1 - 7	2,325
B-4	CONDENSING	75.0	140	180.0	1,500	1,443	NAT. GAS	120	1	8	LONCHINVAR	FBN 1501	1 - 7	2,325
	-									-				

1. PROVIDE AIR LOCK DIRECT VENT SEALED COMBUSTION SYSTEM.

2. PROVIDE ALL SAFETIES. 3 PROVIDE AND INSTALL A CO SENSOR INTERLOCKED TO THE BURNER CONTROLLER AND MONITORED BY FIRE ALARM SYSTEM.

4. INSTALL PER MANUFACTURER'S RECOMMENDATIONS 5. PROVIDE ZERO-CLEARANCE KIT.

6. PROVIDE AIR INLET COVER FOR SINGLE PIPE VENTING METHOD.

7. PROVIDE CONDENSATE NEUTRALIZATION KIT.

	<b>EXPANSION</b>	TANK	SCHED	ULE
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MARK	LOCATION	SYSTEM	TYPE	TANK VOLUME (GAL)	MANUF.	MODEL NO.	REMARKS	OPERATING WEIGHT (>200 LBS.
ET-1	BOILER ROOM	HEATING WATER	VERT. BLADDER	53	BELL & GOSSETT	B-200	NOTES 1 - 3	650

### NOTES:

1. PROVIDE 4" CONCRETE HOUSE KEEPING PAD FOR FLOOR MOUNTED TANKS 2. TANK SHALL BEAR ASME LABEL FOR 'AT OR ABOVE' THE DESIGN PRESSURE INDICATED.

3. PROVIDE DRAIN VALVE AND LINE FULL SIZE TO THE NEAREST SAN. SEWER TERMINATION POINT.

AIR	SEP	ERA	TOR	SCH	EDU	LE

MARK	LOCATION	SYSTEM	TYPE	GPM	INLET / OUTLET SIZE (IN.)	MAX. P.D. (FT.)	MANUF.	MODEL NO.	REMARKS	OPERATING WEIGHT (>200 LBS.)
AS-1	BOILER ROOM	HEATING WATER	CENTRIGUGAL, FULL FLOW	300	4"	0.74	BELL & GOSSETT	RL-4FB	NOTES 1 - 3	275

### NOTES:

1. RATED FOR 125 PSIG AT 200F. 2. INTEGRAL SEPARATOR AND AIR VENT.

3. MANUAL BLOWDOWN VALVE.

### PUMP SCHEDULE

						MOTOR DATA MINIM				Γ	1		I	T	
DESIG.	SERVICE	LOCATION	TYPE	GPM	HEAD		MOTOF	R DATA		MINIMUM	MFG.	SERIES	MODEL	OP. WEIGHT	REMARKS
DEGIG.	GERVIOE	200/111014	1112	OI IVI	(FT.)	HP	V / PH	RPM	STARTER	EFF.	Wii O.	OLIVILO	NUMBER	(>200 LBS.)	TALIVIA II AA
CHWP-1	CHILLED WATER	MECH RM.	END SUCTION, CENTRIFUGAL	310	95	15	460/3	1800	VFD	74%	BELL & GOSSETT	E-1510	3EB	775	SEE NOTES 1, 2, 3
CHWP-2	CHILLED WATER	MECH RM.	END SUCTION, CENTRIFUGAL	310	95	15	460/3	1800	VFD	74%	BELL & GOSSETT	E-1510	3EB	775	SEE NOTES 1, 2, 3
HHWP-1	HEATING HOT WATER	BOILER RM.	VERTICAL CLOSED COUPLE CENTRIF.	130	85	7.5	460/3	1800	VFD	61.5%	BELL & GOSSETT	E-80	2x2x9.5C	275	SEE NOTES 1, 2, 3
HHWP-2	HEATING HOT WATER	BOILER RM.	VERTICAL CLOSED COUPLE CENTRIF.	130	85	7.5	460/3	1800	VFD	61.5%	BELL & GOSSETT	E-80	2x2x9.5C	275	SEE NOTES 1, 2, 3

1. VARIABLE FREQUENCY DRIVE FOR SOFT START ONLY.

2. INSULATE PUMP CASE PER DIVISION 23 SPECIFICATIONS. 3. PROVIDE PUMP SUCTION DIFFUSER WITH FLEX CONNECTOR. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

HYDRONIC WATER CONTRO	L VALVE / ACTUATOR SCHEDULE
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DESIG.	LOCATION	ASSOC.	SERVICE	TYPE	VALVE	СН	ILL RETURN VALVES	S	ACT. CV	CLOSE-OFF	FAIL CLOSED	FAIL OPEN	MANUFACTURER	MODEL	REMARKS
DEGIG.	LOCATION	EQUIP.	OLITVIOL	1111	TYPE	LINE SIZE (IN	I) VALVE SIZE (IN)	GPM	A01. 0V	PRESS. (PSI)	(N.C.)	(N.O.)	WANDI ACTORER	WODEL	KLIVIAKKO
CCV-1	LEVEL 1 - EAST - MECH ROOM	AHU-I-1	CHW COIL	3-WAY	BALL	3"	1-1/4"	62.3	18	40		X	HONEYWELL	VBN3DL	SEE NOTES 1 - 3
HCV-1	LEVEL 1 - EAST - MECH ROOM	AHU-I1	HW COIL	3-WAY	BALL	1-1/2"	1-1/4"	20.2	12	40		Х	HONEYWELL	VBN3DK	SEE NOTES 1 - 3
CCV-2	LEVEL 1 - EAST - MECH ROOM	AHU-I2	CHW COIL	3-WAY	BALL	1-1/2"	3/4"	22.2	8	50		X	HONEYWELL	VBN3BK	SEE NOTES 1 - 3
HCV-2	LEVEL 1 - EAST - MECH ROOM	AHU-I2	HW COIL	3-WAY	BALL	1"	1"	8.2	19	50		Х	HONEYWELL	VBN3CL	SEE NOTES 1 - 3
CCV-3	LEVEL 1 - EAST - MECH ROOM	AHU-I3	CHW COIL	3-WAY	BALL	2"	1-1/4"	45	9	40		Х	HONEYWELL	VBN3DK	SEE NOTES 1 - 3
HCV-3	LEVEL 1 - EAST - MECH ROOM	AHU-I3	HW COIL	3-WAY	BALL	1-1/2"	1-1/4"	20.4	20	40		Х	HONEYWELL	VBN3DM	SEE NOTES 1 - 3
CCV-4	LEVEL 1 - EAST - MECH ROOM	AHU-I4	CHW COIL	3-WAY	BALL	3"	2"	118.7	59	40		X	HONEYWELL	VBN3FR	SEE NOTES 1 - 3
HCV-4	LEVEL 1 - EAST - MECH ROOM	AHU-I4	HW COIL	3-WAY	BALL	2"	1-1/2"	48.8	27	40		X	HONEYWELL	VBN3EM	SEE NOTES 1 - 3
CCV-5	LEVEL 1 - EAST - MECH ROOM	AHU-I5	CHW COIL	3-WAY	BALL	3/4"	1/2"	2.7	3	50		X	HONEYWELL	VBN3AH	SEE NOTES 1 - 3
CCV-6	TIER LEVEL - EAST - MECH ROOM	AHU-I6	CHW COIL	3-WAY	BALL	2"	1-1/2"	45.5	51	40		X	HONEYWELL	VBN3EP	SEE NOTES 1 - 3
HCV-6	TIER LEVEL - EAST - MECH ROOM	AHU-I6	HW COIL	3-WAY	BALL	1-1/2"	1-1/4"	21.7	20	40		Х	HONEYWELL	VBN3DM	SEE NOTES 1 - 3
CCV-7	TIER LEVEL - EAST - MECH ROOM	AHU-I7	CHW COIL	3-WAY	BALL	2"	1-1/4"	60	20	40		Х	HONEYWELL	VBN3DM	SEE NOTES 1 - 3
HCV-7	TIER LEVEL - EAST - MECH ROOM	AHU-I7	HW COIL	3-WAY	BALL	1-1/2"	1-1/4"	22.9	30	40		Х	HONEYWELL	VBN3DN	SEE NOTES 1 - 3
CCV-8	TIER LEVEL - EAST - MECH ROOM	AHU-I8	CHW COIL	3-WAY	BALL	2"	1-1/2"	45.2	30	40		Х	HONEYWELL	VBN3EM	SEE NOTES 1 - 3
HCV-8	TIER LEVEL - EAST - MECH ROOM	AHU-I8	HW COIL	3-WAY	BALL	1-1/4"	1"	15.6	21	50		Х	HONEYWELL	VBN3CL	SEE NOTES 1 - 3
CCV-9	TIER LEVEL - EAST - MECH ROOM	AHU-I9	CHW COIL	3-WAY	BALL	2"	1-1/2"	35.4	32	40		Х	HONEYWELL	VBN3EM	SEE NOTES 1 - 3
HCV-9	TIER LEVEL - EAST - MECH ROOM	AHU-I9	HW COIL	3-WAY	BALL	1-1/4"	1"	14.7	27	50		Х	HONEYWELL	VBN3CM	SEE NOTES 1 - 3
CCV-10	TIER LEVEL - EAST - MECH ROOM	AHU-I10	CHW COIL	3-WAY	BALL	1-1/2"	1-1/4"	28.6	26	40		Х	HONEYWELL	VBN3DM	SEE NOTES 1 - 3
HCV-10	TIER LEVEL - EAST - MECH ROOM	AHU-I10	HW COIL	3-WAY	BALL	1-1/4"	1"	12.4	18	50		Х	HONEYWELL	VBN3CL	SEE NOTES 1 - 3

1. ALL VALVE ACTUATORS ARE PROPORTIONAL 24V ELECTRONIC WITH 2-10VDC CONTROL SIGNAL.

2. VALVES SHALL BE FULL PORT STAINLESS STEEL BALL AND STEM.

3. HONEYWELL VALVE AND ACUATORS ARE THE BASIS OF DESIGN. PRE-APPROVED ALTERNATES ARE ACCEPTABLE.

DECIO	SEDVES	CMOVE 70NE	OFNA	DUCT	MANUEACTURE	ELECTRICAL DATA	MODEL	
DESIG.	SERVES	SMOKE ZONE	CFM	DIMENSIONS	MANUFACTURER	V/PH	NUMBER	REMAR
M-1A	AHU-I-1	ZONE 5	2,815	64x18	RUSKIN	120/1	SD	1 - 9
M-1B	AHU-I-1	ZONE 5	4,070	54X18	RUSKIN	120/1	SD	1 - 9
M-1C	AHU-I-1	ZONE 5	1,300	18X12	RUSKIN	120/1	SD	1 - 9
M-1D	SSF-05	ZONE 5	4,350	28X14	RUSKIN	120/1	SD	1 - 9
M-2A	AHU-I-2	ZONE 6	1,230	20X12	RUSKIN	120/1	SD	1 - 9
M-2B	AHU-I-2	ZONE 6	1,120	26X14	RUSKIN	120/1	SD	1 - 9
M-2C	AHU-I-2	ZONE 6	780	16X8	RUSKIN	120/1	SD	1 - 9
M-2D	SSF-06	ZONE 6	2,020	16X14	RUSKIN	120/1	SD	1 - 9
M-3A	AHU-I-3	ZONE 7	2,615	36X12	RUSKIN	120/1	SD	1 - 9
M-3B	AHU-I-3	ZONE 7	2,595	34X20	RUSKIN	120/1	SD	1 - 9
M-3C	AHU-I-3	ZONE 7	1,515	24X12	RUSKIN	120/1	SD	1 - 9
M-3D	SSF-07	ZONE 7	5,060	18X28	RUSKIN	120/1	SD	1 - 9
M-6A	AHU-I-6	ZONE 3	1,395	16X16	RUSKIN	120/1	SD	1 - 9
M-6B	SEF-03	ZONE 3	54,190	56X54	RUSKIN	120/1	SD	1 - 9
M-6C	AHU-I-6	ZONE 3	8,925	30X30	RUSKIN	120/1	SD	1 - 9
M-6D	SSF-03A / SSF-03B / SSF-03C	ZONE 3	49,550	58X46	RUSKIN	120/1	SD	1 - 9
M-6E	AHU-I-6	ZONE 3	7,530	28X36	RUSKIN	120/1	SD	1-9
M-6F		Λ Λ	, , , , , , , , , , , , , , , , , , ,	. λ	NOT USED		λ	,
M-7A	SSF-02	ZONE 2	37,725	46X44	RUSKIN	120/1	SD	1-9
M-7B	AHU-I-7	ZONE 2	2,995	20X22	RUSKIN	120/1	SD	1 - 9
M-7C	AHU-I-7	ZONE 2	7,180	28X28	RUSKIN	120/1	SD	1 - 9
M-7D	SEF-02	ZONE 2	41,260	46X46	RUSKIN	120/1	SD	1 - 9
M-7E	AHU-I-7	ZONE 2	4,185	30x26	RUSKIN	120/1	SD	1 - 9
M-8A	SSF-01	ZONE 1	13,205	28X32	RUSKIN	120/1	SD	1 - 9
M-8B	AHU-I-8	ZONE 1	2,515	20X20	RUSKIN	120/1	SD	1 - 9
M-8C	AHU-I-8	ZONE 1	5,295	28x26	RUSKIN	120/1	SD	1 - 9
M-8D	AHU-I-8	<del>70</del> NE 1	2,780	44X16	RUSKIN	120/1	SD	1-9

120/1

120/1

120/1

1 - 9

1 - 9

1 - 9

RUSKIN

RUSKIN

RUSKIN

71E3.
TWO-POSITION, LOW LEAKAGE, SMOKE RATED DAMPER.

2. OPENS IN LESS THAN 10 SECONDS.

SEF-04

AHU-I-9

SSF-04

3. ACTUATOR MUST HAVE LOW-VOLTAGE CONTACTS FOR MONITORING BY FIRE ALARM PANEL.

ZONE 4

ZONE 4

4. PROVIDE END SWITCH ON THE OPPOSED BLADE.

M-9B

M-9D

5. FAIL OPEN IN ALARM. 6. SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR.

7. WIRED BY ELECTRICAL CONTRACTOR.

8. CONTROLLED/MONITORED BY FIRE/SMOKE CONTRACTOR.

9. EACH ZONE SHALL BE ON SEPARATE POWER CIRCUIT, REFER TO ELECTRICAL DRAWINGS AND SCHEDULES.

37,390

7,175

36X56

**OPERATING** WEIGHT (>200 LBS)

MICHAEL JOSEPH SMITH

# DATE DESCRIPTION 1 08.18.2021 ADDENDUM #2

MECHANICAL SCHEDULES

Texas Registered Engineering Firm No. F-7489 1255 West 15th Street, Suite 300 - Plano, TX 75075

Email: mdengca@md-eng.com Project No.: 201254

FAX: 469.467.0300

PH: 469.467.0200

2016 ASHRAE 62.1 CODE VENTILATION RATES

ROOM DESCRIPTION

DAYROOM / DINING / TV

STAFF RESTROOM

INMATE TOILET

SHOWER

JAN.

INMATE TOILET

STORAGE

INMATE TOILET

SHOWER

JAN.

SAFETY VESTIBULE

INMATE TOILET

STORAGE

CORRIDOR

STORAGE ROOM

**BREAK ROOM** 

STAFF TOILET

LOCATION

(ROOM NO.)

2201 / 2202 / 2207

2205

2217

2218

2219

2229

2231

3208

3209

3211

3216

3222

3223

2001

2002

2003

2004

1111

1112

1113

1404

1318

VRF-04/01

VRF-04/02

OFFICE

PRINT / COPY / WORK ALCOVE

STAFF BREAK ROOM

ELEC

ELEV. MACHINE ROOM

OFFICE SPACE

OFFICE SPACE

**BREAK ROOMS** 

TELEPHONE CLOSETS

TELEPHONE CLOSETS

220

285

365

5

DESIG.

AHU-I-7

VRF-01/02

Vot %OA

cfm Vot / Vps

2,511 47.5

0 0.0

47.5

14.6

11.2

12.2

24.3

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

2,511

800

878

1,162

Vou

2,300

2,300

1.00

0.00

0.00

0.00

Vps

5,292

Xs

0.435

0.435

0.000

0.000

0.000

0.000

0.000

0.000

TRACE® 700 v6.3.5 calculated at 01:01 PM on 04/07/2021

TRACE® 700 v6.3.5 calculated at 01:01 PM on 04/07/2021

Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 2 of 23

Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 1 of 23

1 08.18.2021 ADDENDUM #2

HISTORY

DESCRIPTION

**MECHANICAL** SCHEDULES



1255 West 15th Street, Suite 300 - Plano, TX 75075

Email: mdengca@md-eng.com Project No.: 201254

FAX: 469.467.0300

PH: 469.467.0200

## **ASHRAE Standard 62.1-2004-2010** By MD ENGINEERING **System Ventilation Requirements** ∑ Pz ∑ Vpz People People Ps/∑Pz Cooling 5,292 Heating Cooling Heating Cooling 8,925 Heating 8,925 Cooling 7,171 Heating 7,171 Cooling Heating Cooling Cooling Heating Heating Cooling Heating Cooling Heating Cooling Heating 0.00 Cooling 0.00 201254 Collin Co ADF Booking Add

## **ASHRAE Standard 62.1-2004-2010** By MD ENGINEERING

## System Ventilation Requirements

AHU Location Description

AHU-18

AHU-I7

AHU-16

AHU-19

AHU-I0

VRF-01/01 - (Calc 1396)

VRF-01/02 - (Calc 449)

VRF-01/03 - (calc 1239)

VRF-01/04 - (calc 548)

VRF-01/05 - (calc 1586)

VRF-01/06 - (calc 987)

VRF-01/07 - (calc 826)

VRF-01/08 - (calc 721)

VRF-01/09 - (calc 556)

Alternative 1

Zone

Project Name:

Dataset Name: 201254-LOAD.TRC

546.2	F					2015						
AULI eastion	Description		∑ Vpz cfm	Ps People	∑ Pz People	D Ps /∑Pz	Vou cfm	Vps cfm	Xs	Ev	Vot	%OA Vot / Vps
AHU Location	Description		CIIII	1 copie	1 copie	10/2.12	OIIII	0			0	votr vpe
Alternative 1		<u>.</u>		_	_	0.00		_	0.000	0.000	_	0.0
Room	Heat Only	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
	A STATE OF THE STA	Heating	1,298	0	0	1.00	0	1,298	0.000	1.000	0	0.0
Zone	AHU-I5	Cooling	720	14	14	1.00	59	720	0.082	1.000	59	8.2
		Heating	720	14	14	1.00	59	720	0.082	1.000	59	8.2
Zone	AHU-I1	Cooling	6,915	165	165	1.00	1,737	6,915	0.251	0.744	2,334	33.8
		Heating	6,915	165	165	1.00	1,737	6,915	0.251	0.617	2,814	40.7
Zone	AHU-I2	Cooling	2,425	68	68	1.00	654	2,425	0.270	0.680	962	39.7
		Heating	2,425	68	68	1.00	654	2,425	0.270	0.532	1,228	50.6
Zone	AHU-I3	Cooling	5,210	70	70	1.00	1,769	5,210	0.339	0.811	2,182	41.9
		Heating	5,210	70	70	1.00	1,769	5,210	0.339	0.678	2,607	50.0
Zone	AHU-I4	Cooling	13,346	0	0	1.00	6,646	13,346	0.498	0.998	6,660	49.9
		Heating	13,346	0	0	1.00	6,646	13,346	0.498	0.998	6,660	49.9
Zone	VRF-02/01 - 02	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
		Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zone	VRF-02/04 (assumed 2T Future IT	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
		Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zone	VRF-02/05	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
R 4 7024 W		Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zone	VRF-02/03 (assumed 2T Future IT	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	
		Heating	0	0	0	0.00	0	. 0	0.000	0.000	0	0.0
Zone	VRF-03/01 - (calc 732)	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
20110	(0.000)	Heating	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zone	VRF-04/01	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zono	VIII. 07701	Heating	0	0	0	0.00	0	0	0.000	0.000	0	
Zone	VRF-04/02	Cooling	0	0	0	0.00	0	0	0.000	0.000	0	0.0
Zone	VINI-04/02				0		0	0	0.000	0.000	0	
		Heating	0	0	U	0.00	U	U	0.000	0.000	U	0.0

\* Apply Single Zone Ventilation Calculation

Project Name: 201254 Collin Co ADF Booking Add Dataset Name: 201254-LOAD.TRC

CORRIDOR 720 CORRIDOR 0.06 1301 44 1302 VISIT CONFERENCE/MEETING 0.06 14 1303 VISIT CONFERENCE/MEETING 40 0.06 1304 FEMALE CHANGING CUBICLES CORRIDOR 285 0.06 18 1305 MALE CHANGING CUBICLES CORRIDOR 285 0.06 18 18 1306 RR STAFF **TOILETS - PUBLIC** VRF-01/03 70 1307 ELEC. MON. VEND. 90 STORAGE ROOM 0.06 1316 SAFETY VEST. CORRIDOR 135 0.06 SAFETY VEST. CORRIDOR 1402 VISIT 13 CONFERENCE/MEETING 0.06 VISIT 1403 CONFERENCE/MEETING 0.06 MINIMUM REQUIRED (CFM) = 153 AREA - TOTAL INSTALLED (CFM) = 155 RECORDS / BOND OFFICE STATION OFFICE SPACE 365 22 27 0.06 1309 BONDING SUPV. OFFICE SPACE 155 0.06 10 10 VRF-01/04 400 1311 RELEASE PROCESSING STATION OFFICE SPACE 0.06 24 29 1312 50 INMATE RR TOILETS - PUBLIC -1313 SAFETY VEST. CORRIDOR 50 0.06 3 MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = MAIN ENTRY LOBBIES OPEN WAIT - SELF REPORTS 305 0.06 19 1315 INMATE RR TOILETS - PUBLIC 45 VRF-01/05 1025 1401 CORRIDOR CORRIDOR 62 0.06 MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = 125 CORRIDOR CORRIDOR 905 0.06 55 VRF-01/06 230 1406 CORRIDOR CORRIDOR 0.06 MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = 930 1208 CORRIDOR CORRIDOR 0.06 56 56 VRF-01/07 1210 FEMALE SHOWER / SEARCH SHOWER ROOMS 415 1211 415 MALE SHOWER / SEARCH SHOWER ROOMS MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = 110 VRF-01/08 2024 CORRIDOR CORRIDOR 1215 73 73 - - - -MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = INMATE TRANSFER / CIRCULATION 935 57 VRF-01/09 2024 CORRIDOR 0.06 57 MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = VRF-02/01 2017 TELEPHONE CLOSETS 2017 TELEPHONE CLOSETS VRF-02/02 -VRF-02/03 1213 TELEPHONE CLOSETS VRF-02/04 2015 TELEPHONE CLOSETS ELEC VRF-02/05 1026 TELEPHONE CLOSETS 75 MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = BOOKING / RELEASE / CLASS. SUPV. OFFICE SPACE 0.06 STORAGE ROOM 1110 ADMISSIONS / RELEASE MGR. OFFICE SPACE 155 0.06 10 VRF-03/01

OUTSIDE AIR (OA)

x CFM/PERSON

725

CFM=SF x OUTSIDE AIR

(CFM)

1,017

1,043

(CFM / SF)

292

5

8

84

10

14

18

-

MINIMUM REQUIRED (CFM) = AREA - TOTAL INSTALLED (CFM) = 100

MINIMUM REQUIRED (CFM) =

AREA - TOTAL INSTALLED (CFM) =

BUILDING - MINIMUM REQUIRED (CFM) =

BUILDING - TOTAL INSTALLED OUTSIDE AIR (CFM) =

0.06

0.06

0.06

10

19

43

0.06

0.06

0.06

0.06

0.06

0.06

0.06

0.06

0.06

MINIMUM REQUIRED (CFM) =

MINIMUM REQUIRED (CFM) =

MINIMUM REQUIRED (CFM) =

AREA - TOTAL INSTALLED (CFM) =

AREA - TOTAL INSTALLED (CFM) =

AREA - TOTAL INSTALLED (CFM) =

ACTUAL CFM / OCCUPANCY PERSON CFM/PERSON CFM / AREA SF

OCCUPIABLE

AREA

4860

70

80

105

70

35

55

80

105

70

130

35

55

1385

225

390

75

145

-

**ROOM TYPE** 

DAYROOM

TOILETS - PUBLIC

TOILETS - PUBLIC

SHOWER ROOMS

STORAGE ROOM

TOILETS - PUBLIC

STORAGE ROOM

TOILETS - PUBLIC

SHOWER ROOMS

STORAGE ROOM

CORRIDOR

TOILETS - PUBLIC

STORAGE ROOM

CORRIDOR

STORAGE ROOM

**BREAK ROOMS** 

TOILETS - PUBLIC

# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2



MECHANICAL SCHEDULES

**ASHRAE Standard 62.1-2004-2010** 

By MD ENGINEERING

### **Ventilation Parameters**

				- AN - B			Std 170	— Cc	ooling—	— Н	eating—
System Zone Room	Occupancy Category	Rp cfm / p	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Min OA ach	Ez	Voz cfm	Ez	Voz
Alternative 1											
24/19c - Storage	Corridors	0.00	0.00	0.06	220	13		1.00	13	0.80	17
24/19d - Storage	Corridors	0.00	0.00	0.06	140	8		1.00	8	0.80	10
AHU-I6		2.50	72.00	0.11	9,565	1,186			1,186		1,303
AHU-I6 - Mens Dorm (N Pod)		2.50	72.00	0.11	9,565	1,186			1,186		1,303
21/01 - DAYROOM/DINING/TV	None	0.00	18.00	285.00	2,030	285		1.00	285	1.00	285
21/02 - DORMITORY	Barracks sleeping areas	5.00	4.00	0.06	330	40		1.00	40	0.80	50
21/05 - STAFF RESTROOM	Corridors	0.00	0.00	0.06	80	5		1.00	5	0.80	6
21/07 - STORAGE	Storage rooms	0.00	0.00	0.12	130	16		1.00	16	0.80	19
21/08 - Storage - 2309	Storage rooms	0.00	0.00	0.12	65	8		1.00	8	0.80	10
21/09 - Domitory - 2311	Barracks sleeping areas	5.00	2.00	0.06	170	20		1.00	20	0.80	25
21/10 - Dayroom / Showers	Office space	5.00	0.00	0.06	965	58		1.00	58	0.80	72
21/11 - Domitory - 2316/2317	Barracks sleeping areas	5.00	4.00	0.06	330	40		1.00	40	0.80	50
21/12 - JC - 2318	Storage rooms	0.00	0.00	0.12	85	10		1.00	10	0.80	13
21/14 - DORMITORY - 2321/2322	Barracks sleeping areas	5.00	4.00	0.06	330	40		1.00	40	0.80	50
21/15 - CORRIDOR / Inmate Toilet	Corridors	0.00	0.00	0.06	920	55		1.00	55	0.80	69
21/16 - Dormitory - 2325/2326	Barracks sleeping areas	5.00	4.00	0.06	325	40		1.00	40	0.80	49
21/17 - JC - 2327	Storage rooms	0.00	0.00	0.12	130	16		1.00	16	0.80	19
21/18 - Storage - 2328	Storage rooms	0.00	0.00	0.12	125	15		1.00	15	0.80	19
21/19 - STAIR	Corridors	0.00	0.00	0.06	275	17		1.00	17	0.80	21
21/20 - Stair	Corridors	0.00	0.00	0.06	275	17		1.00	17	0.80	21
AHU-19	An instrument and the state of	2.50	36.00	0.09	6,565	679		Street Sept.	679	0.00	778
AHU-I9 - Female Dorm (SW Pod)		2.50	36.00	0.09	6,565	679	740 110		679	The said of the	778
13/01 - OFFICER WORK STATION	Office space	5.00	2.00	0.06	245	25	mornan viatamente electro	1.00	25	0.80	31
13/02 - CORRIDORS	Corridors	0.00	0.00	0.06	1,940	116		1.00	116	0.80	145
13/03 - MEDICAL Distribution - 2006	Office space	5.00	2.00	0.06	105	16		1.00	16	0.80	20
13/04 - MED Distribution- 2303	Office space	5.00	2.00	0.06	90	15		1.00	15	0.80	19
13/05 - MULTIPURPOSE ROOM	Multi-purpose assembly	5.00	9.00	0.06	285	62		1.00	62	0.80	
13/06 - Corridor	Corridors	0.00	0.00	0.06	365	22		1.00	22	0.80	78 27
13/07 - Corridor	Corridors	0.00	0.00	0.06	630	38		1.00	38	0.80	
13/08 - Corridor / SV - 2120/2148	Corridors	0.00	0.00	0.06	295	18		1.00	18	0.80	47
13/09 - Visit - 2054/2056/2089/2100/211	Conference/ meeting	8.65	20.00	0.10	585	229		1.00	229	0.80	22 287
		0.00	_5.00	0.10	000	220		1.00	220	0.00	287

Project Name: 201254 Collin Co ADF Booking Add 201254-LOAD.TRC

TRACE® 700 v6.3.5 calculated at 01:01 PM on 04/07/2021 Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 5 of 23

**ASHRAE Standard 62.1-2004-2010** 

By MD ENGINEERING

## **Ventilation Parameters**

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			5		(I)		Std 170	— Со	oling—	—He	ating—
	Occupancy	Rp	Pz	Ra	Az	Vbz	Min OA	Ez	Voz	Ez	Voz
System Zone Room	Category	cfm / p	People	cfm/ft²	ft²	cfm	ach		cfm	. 75 (	cfm
Alternative 1											
13/10 - Medical Distribution - 2103	Office space	5.00	2.00	0.06	85	15		1.00	15	0.80	19
13/11 - MULTIPURPOSE	Multi-purpose assembly	5.00	9.00	0.06	290	62		1.00	62	0.80	78
13/12 - MULTIPURPOSE	Multi-use assembly	7.50	9.00	0.06	290	85		1.00	85	0.80	106
13/13 - Medical Distribution - 2203	Office space	5.00	2.00	0.06	85	15		1.00	15	0.80	19
AHU-IO		6.68	57.00	0.06	5,290	719			719		899
AHU-I0 - Guard & Support Area		6.68	57.00	0.06	5,290	719			719		899
16/01 - MECH / ELC - 2004	None	0.00	0.00	0.00	1,750	0		0.00	0	1.00	0
16/01B - MECH / ELC - 2004	None	0.00	0.00	0.00	185	0		0.00	0	1.00	0
UH-01		0.00	0.00	0.00	1,935	0			0	T 800	0
10/01 - Mechanical	None	0.00	0.00	0.00	175	0		0.00	0	1.00	0
UH-02		0.00	0.00	0.00	175	0			0		C
15/01 - Vehicle Sallyport	None	0.00	0.00	0.00	10,835	0		0.00	0	1.00	0
UH-03 & 04 & 05		0.00	0.00	0.00	10,835	0			0		0
17/01 - Mechanical	None	0.00	0.00	0.00	190	0		0.00	0	1.00	0
UH-06		0.00	0.00	0.00	190	0			0		0
18/01 - Future Finishout	None	0.00	0.00	0.00	1,510	0		0.00	0	1.00	0
UH-07 & 08		0.00	0.00	0.00	1,510	0			0		0
16/01A - BOILER RM	None	0.00	0.00	0.00	185	0		0.00	0	1.00	0
UH-09	and a strong and Europe and	0.00	0.00	0.00	185	0			0		0
28/01 - Alternate 1 - shell	None	0.00	0.00	0.00	3,037	0		0.00	0	1.00	0
UH-10 & 11 & 12	and the state of t	0.00	0.00	0.00	3,037	0	- 6.048 F. F. S. S.		0	1457.44.7	0
Heat Only		0.00	0.00	0.00	17,867	0			0		0
01/01 - Court Room	Courtrooms	2.50	14.00	0.03	810	59	e de la companya de La companya de la co	1.00	59	0.80	74
AHU-I5		2.50	14.00	0.03	810	59			59		74
AHU-I5 - Courtroom (IONIZER)		2.50	14.00	0.03	810	59			59		74
08/01 - ADA RR INMATE	Corridors	0.00	0.00	0.06	60	4		1.00	4	0.80	F
08/02 - RR INMATE	Corridors	0.00	0.00	0.06	40	2		1.00	2	0.80	3
08/03 - SECURE HOLDING CELL	Barracks sleeping areas	5.00	5.00	0.06	150	34		1.00	34	0.80	43
08/04 - SECURE HOLDING CELL	Barracks sleeping areas	5.00	5.00	0.06	150	34		1.00	34	0.80	43
08/05 - SECURE HOLDING CELL	Barracks sleeping areas	5.00	5.00	0.06	150	34		1.00	34	0.80	43
08/06 - HOLDING CELL	Barracks sleeping areas	5.00	3.00	0.06	90	20		1.00	20	0.80	26

Project Name: 201254 Collin Co ADF Booking Add Dataset Name: 201254-LOAD.TRC

TRACE® 700 v6.3.5 calculated at 01:01 PM on 04/07/2021 Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 6 of 23

## **ASHRAE Standard 62.1-2004-2010**

By MD ENGINEERING

### **Ventilation Parameters**

							Std 170	— Co	oling—	—He	ating-
System Zone Room	Occupancy Category	Rp cfm / p	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Min OA ach	Ez	Voz cfm	Ez	Voz
Alternative 1											
26/01 - SEP CELL	None	0.00	2.00	4.11	80	63		1.00	63	1.00	63
26/02 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/03 - SEP CELL	None	0.00	2.00	4.11	80	63		1.00	63	1.00	63
26/04 - SEP CELL	None	0.00	2.00	4.11	80	63		1.00	63	1.00	63
26/06 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/07 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/08 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/09 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/11 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/12 - SEP CELL	None	0.00	2.00	4.11	80	63		1.00	63	1.00	63
26/13 - SEP CELL	None	0.00	2.00	4.11	80	63		1.00	63	1.00	63
26/15 - HC DBL	None	0.00	2.00	4.11	90	71		1.00	71	1.00	71
26/16 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/17 - SEP CELL	None	0.00	2.00	4.11	80	63		1.00	63	1.00	63
26/18 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/19 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/20 - SEP CELL	None	0.00	2.00	4.11	85	67		1.00	67	1.00	67
26/21 - SEP CELL	None	0.00	2.00	4.11	80	63		1.00	63	1.00	63
22/01 - SEP CELL	None	0.00	2.00	4.11	80	58		1.00	58	1.00	58
22/02 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/03 - SEP CELL	None	0.00	2.00	4.11	80	58		1.00	58	1.00	58
22/04 - SEP CELL	None	0.00	2.00	4.11	80	58		1.00	58	1.00	58
22/06 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/07 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/08 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/09 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	
22/11 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/12 - SEP CELL	None	0.00	2.00	4.11	80	58		1.00	58	1.00	61 59
22/13 - SEP CELL	None	0.00	2.00	4.11	80	58		1.00	58	1.00	58
22/15 - SEP CELL	None	0.00	2.00	4.11	90	65		1.00	65	1.00	58 65
22/16 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	00

Project Name: 201254 Collin Co ADF Booking Add 201254-LOAD.TRC

**ASHRAE Standard 62.1-2004-2010** 

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## **Ventilation Parameters**

To James					g <sup>23</sup> p		Std 170	— Co	ooling—	—Не	eating-
	Occupancy	Rp	Pz	Ra	Az	Vbz	Min OA	Ez	Voz	Ez	Vo
System Zone Room	Category	cfm / p	People	cfm/ft²	ft²	cfm	ach	195	cfm		cfr
Alternative 1											
22/17 - ESP CELL	None	0.00	2.00	4.11	80	58		1.00	58	1.00	58
22/18 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/19 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/20 - SEP CELL	None	0.00	2.00	4.11	85	61		1.00	61	1.00	61
22/21 - SEP CELL	None	0.00	2.00	4.11	80	58		1.00	58	1.00	58
23/13 - STAIR - ST02	Corridors	0.00	0.00	0.06	265	16		1.00	16	0.80	20
23/06 - Safety Vestibule - 1219	Corridors	0.00	0.00	0.06	130	8		1.00	8	0.80	10
23/15 - Stair	Corridors	0.00	0.00	0.06	265	16		1.00	16	0.80	20
AHU-I8		0.00	72.00	0.63	3,660	2,300			2,300		2,310
AHU-I8 - Dbl Cells - (SE Pod)		0.00	72.00	0.63	3,660	2,300			2,300		2,310
24/01 - Dorm 2118	Barracks sleeping areas	5.00	2.00	0.06	165	20		1.00	20	0.80	2
24/02 - JANITOR	Storage rooms	0.00	0.00	0.12	100	12		1.00	12	0.80	1:
24/03 - Dorm - 2125	Barracks sleeping areas	5.00	2.00	0.06	165	20		1.00	20	0.80	2
24/04 - DAYROOM/DINING/TV	None	0.00	36.00	0.44	2,600	467		1.00	467	1.00	467
24/05 - STAFF RESTROOM	Corridors	0.00	0.00	0.06	70	4		1.00	4	0.80	
24/09 - Dormitory - 2119/2121/2122/212	Barracks sleeping areas	5.00	8.00	0.06	670	80		1.00	80	0.80	100
24/10 - HC Domitory - 2117	Barracks sleeping areas	5.00	2.00	0.06	155	19		1.00	19	0.80	24
24/11a - Domitory - 2113	Barracks sleeping areas	5.00	2.00	0.06	165	20		1.00	20	0.80	2
24/12 - Dayroom / Dining / TV - 2101	None	0.00	0.00	0.44	1,385	107	Comment of the second of the second	1.00	107	1.00	10
24/13 - Dorm - 3109	Barracks sleeping areas	5.00	2.00	0.06	160	20		1.00	20	0.80	2
24/14 - Domitory - 2135/2136/2137/213	Barracks sleeping areas	5.00	8.00	0.06	660	80		1.00	80	0.80	10
24/15 - JANITOR	Storage rooms	0.00	0.00	0.12	100	12		1.00	12	0.80	1
24/16 - Dorm - 3116	Barracks sleeping areas	5.00	2.00	0.06	160	20		1.00	20	0.80	2
24/17 - CORRIDOR, DORMITORY	None	0.00	0.00	0.44	1,385	147		1.00	147	1.00	14
24/18 - Domitory - 2134	Barracks sleeping areas	5.00	2.00	0.06	155	19		1.00	19	0.80	2
24/19a - Domitory - 3104	Barracks sleeping areas	5.00	2.00	0.06	165	20		1.00	20	0.80	2
24/20 - STAIR - ST03	Corridors	0.00	0.00	0.06	265	16		1.00	16	0.80	20
24/11b - Domitory - 2111	Barracks sleeping areas	5.00	2.00	0.06	160	20		1.00	20	0.80	2
24/11c - Storage	Storage rooms	0.00	0.00	0.12	220	26		1.00	26	0.80	3
24/11d - storage	Storage rooms	0.00	0.00	0.12	140	17		1.00	17	0.80	2
24/19b - Domitory - 3102	Barracks sleeping areas	5.00	2.00	0.06	160	20		1.00	20	0.80	24

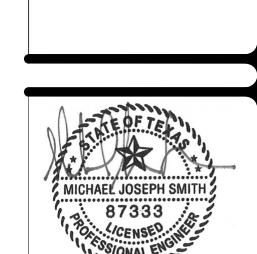
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Texas Registered Engineering Firm No. F-7489 1255 West 15th Street, Suite 300 - Plano, TX 75075 FAX: 469.467.0300 PH: 469.467.0200 Email: mdengca@md-eng.com Project No.: 201254

# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2



MECHANICAL SCHEDULES

## **ASHRAE Standard 62.1-2004-2010**

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### **Ventilation Parameters**

			)("8				Std 170	—(	Cooling—	—H	leating—
System Zone Room	Occupancy Category	Rp cfm / p	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Min OA ach	Ez	Voz cfm	Ez	Voz cfm
Alternative 1											
05/08 - HOLDING CELL	Barracks sleeping areas	5.00	3.00	0.06	95	21		1.00	21	0.80	26
05/09 - HOLDING CELL	Barracks sleeping areas	5.00	3.00	0.06	95	21		1.00	21	0.80	26
05/10 - HC HOLDING CELL	Barracks sleeping areas	5.00	4.00	0.06	115	27		1.00	27	0.80	34
05/11 - HOLDING CELL	Barracks sleeping areas	5.00	3.00	0.06	100	21		1.00	21	0.80	26
05/12 - OPEN WAITING TRANSFER	Lobbies	33.70	30.00	0.35	1,270	1,452		1.00	1,452	0.80	1,815
05/13 - Female Changing	Corridors	0.00	0.00	0.06	230	14		1.00	14	0.80	1,013
05/14 - Janitor	Storage rooms	0.00	0.00	0.00	30	0		1.00	0	1.00	0
05/15 - Male Changing	Corridors	0.00	0.00	0.06	235	14		1.00	14	0.80	18
05/16 - Plumbing Chase	Corridors	0.00	0.00	0.00	10	0		1.00	0	1.00	0
06/09 - SAFETY VESTIBLUE	Corridors	0.00	0.00	0.06	50	3	X7 1 (D)	1.00	3	0.80	1
AHU-13		17.30	70.00	0.17	3,270	1,769			1,769	0.00	2,211
AHU-I3 - Transfer Area		17.30	70.00	0.17	3,270	1,769	78	TANK .	1,769		2,211
04/01 - PROPERTY STORAGE ROOM	None	0.00	0.00	6.00	3,280	5,904		1.00	5,904	1.00	5,904
04/02 - JAIL CLOTHING STORAGE	None	0.00	0.00	6.00	275	495		1.00	495	1.00	495
04/03 - JANITOR	Storage rooms	0.00	0.00	0.12	45	5		1.00	5	0.80	493
04/04 - Val Prop Storage	None	0.00	0.00	6.00	130	234		1.00	234	1.00	234
04/05 - Laundry	Laundry Rooms, Central	5.00	0.00	0.12	65	8		1.00	8	0.80	10
AHU-14	880 CB	0.00	0.00	1.75	3,795	6,646			6,646	0.00	6,650
AHU-I4 - Prop Stor - (50% OSA)		0.00	0.00	1.75	3,795	6,646			6,646		6,650

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## **Ventilation Calculations for Cooling Design**

System Zone Room	Вох Туре	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-clg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 1													
26/01 - SEP CELL	Single Fan CV	150	150	150	0	63	0.421	1.00	0.00	1.00	1.00	1.00	1.000
26/02 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/03 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/04 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/06 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/07 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/08 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/09 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/11 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/12 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/13 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/15 - HC DBL	Single Fan CV	138	138	138	0	71	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/16 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/17 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/18 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/19 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/20 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/21 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
22/01 - SEP CELL	Single Fan CV	125	125	125	0	58	0.460	1.00	0.00	1.00	1.00	1.00	0.975
22/02 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/03 - SEP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/04 - SEP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/06 - SEP CELL	Single Fan CV	124	124	124	0	61	0.493	1.00	0.00	1.00	1.00	1.00	0.942
22/07 - SEP CELL	Single Fan CV	124	124	124	0	61	0.493	1.00	0.00	1.00	1.00	1.00	0.942
22/08 - SEP CELL	Single Fan CV	124	124	124	0	61	0.493	1.00	0.00	1.00	1.00	1.00	0.942
22/09 - SEP CELL	Single Fan CV	125	125	125	0	61	0.491	1.00	0.00	1.00	1.00	1.00	0.944
22/11 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/12 - SEP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/13 - SEP CELL	Single Fan CV	119	119	119	0	58	0.483	1.00	0.00	1.00	1.00	1.00	0.951
22/15 - SEP CELL	Single Fan CV	130	130	130	0	65	0.499	1.00	0.00	1.00	1.00	1.00	0.935
22/16 - SEP CELL	Single Fan CV	120	120	120	0	61	0.512	1.00	0.00	1.00	1.00	1.00	0.923
22/17 - ESP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/18 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916

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### **Ventilation Parameters**

System Zone Room	Occupancy Category	Rp cfm / p	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Std 170 Min OA ach	— Cooling—		—Heating—	
								Ez	Voz	Ez	Voz cfn
Alternative 1											
08/07 - HOLDING CELL	Barracks sleeping areas	5.00	3.00	0.06	90	20		1.00	20	0.80	26
08/08 - HOLDING CELL	Barracks sleeping areas	5.00	3.00	0.06	90	20		1.00	20	0.80	26
08/09 - Detox Cell	Barracks sleeping areas	5.00	2.00	0.06	90	15		1.00	15	0.80	19
08/10 - DETOX HOLDING CELL	Barracks sleeping areas	5.00	5.00	0.06	165	35		1.00	35	0.80	44
08/11 - STOR	Storage rooms	0.00	0.00	0.12	60	7		1.00	7	0.80	9
08/12 - AFIS/FINGER	Corridors	0.00	0.00	0.06	305	18		1.00	18	0.80	23
08/13 - HEALTH SCREEN	Office space	5.00	4.00	0.06	180	31		1.00	31	0.80	39
08/14 - Female/Male	Reception areas	5.00	95.00	0.06	1,435	561		1.00	561	0.80	701
08/15 - PRE TRIAL SERVICES	Office space	5.00	12.00	0.06	545	93		1.00	93	0.80	116
08/16 - HEALTH EXAM	Examination Room	0.00	2.00	2.00	115	69	2.0	1.00	69	0.80	86
08/17 - HEALTH EXAM	Examination Room	0.00	2.00	2.00	115	69	2.0	1.00	69	0.80	86
08/18 - RR INMATE	Corridors	0.00	0.00	0.06	40	2		1.00	2	0.80	3
08/19 - ADA RR INMATE	Corridors	0.00	0.00	0.06	55	3		1.00	3	0.80	The state of the s
08/20 - MENTAL HEALTH SCREENING	Patient Room	0.00	2.00	2.02	100	61	2.0	1.00	61	0.80	76
08/21 - MENTAL HEALTH SCREENING	Patient Room	0.00	2.00	2.00	100	60	2.0	1.00	60	0.80	75
08/22 - MED STO	Medication Room	0.00	0.00	2.00	55	33	2.0	1.00	33	0.80	41
08/23 - RR STAFF	Corridors	0.00	0.00	0.06	85	5		1.00	5	0.80	6
08/24 - INTERVIEW	Office space	5.00	2.00	0.06	90	15		1.00	15	0.80	19
08/25 - INTERVIEW	Office space	5.00	2.00	0.06	90	15		1.00	15	0.80	
08/26 - INTERVIEW	Office space	5.00	2.00	0.06	90	15		1.00	15	0.80	19
08/27 - SAFETY VEST	Corridors	0.00	0.00	0.06	80	5		1.00	5	0.80	19
08/28 - CORRIDOR	Corridors	0.00	0.00	0.06	1,765	106		1.00	106	0.80	132
08/29 - RR STAFF	Corridors	0.00	0.00	0.06	60	4	the production of the state of the same of	1.00	4	0.80	5
08/30 - RR STAFF	Corridors	0.00	0.00	0.06	60	4		1.00	4	0.80	5
08/31 - Stair	Corridors	0.00	0.00	0.06	265	16		1.00	16	0.80	20
08/33 - REC/BOND	Office space	5.00	8.00	0.06	2,330	180		1.00	180	0.80	20
08/40 - BODY SCAN	Office space	5.00	1.00	0.06	345	26		1.00	26	0.80	225
08/41 - Plumbing Chase	Corridors	0.00	0.00	0.06	50	3		1.00	3		32
08/42 - Plumbing Chase	Corridors	0.00	0.00	0.06	345	21		1.00	21	0.80	4
08/44 - Safety Vest	Corridors	0.00	0.00	0.06	65	4		1.00	1	0.80	26
08/45 - Corridor	Corridors	0.00	0.00	0.06	1,535	92		1.00	92	0.80 0.80	5 115

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## **Ventilation Parameters**

	Occupancy	Rp cfm / p	Pz People	Ra cfm/ft²	Az ft²	Vbz cfm	Std 170 Min OA	— Cooling—		—Heating—	
								Ez	Voz cfm	Ez	Voz
System Zone Room	Category						ach		CIIII		cfm
Alternative 1											
AHU-I1		4.76	165.00	0.08	11,435	1,737			1,737		2,171
AHU-I1 - Booking		4.76	165.00	0.08	11,435	1,737		O CONTRACTOR OF THE CONTRACTOR	1,737		2,171
06/01 - SECURE HOLDING	Barracks sleeping areas	5.00	6.00	0.06	145	39		1.00	39	0.80	48
06/02 - SAFETY VEST	Corridors	0.00	0.00	0.06	150	9		1.00	9	0.80	11
06/03 - INTOX	Office space	5.00	6.00	0.06	145	39		1.00	39	0.80	48
06/04 - HOLDING CELL - HC	Barracks sleeping areas	5.00	4.00	0.06	120	27		1.00	27	0.80	34
06/05 - HOLDING CELL	Barracks sleeping areas	5.00	1.00	0.06	65	9		1.00	9	0.80	11
06/06 - HOLDING CELL	Barracks sleeping areas	5.00	1.00	0.06	65	9		1.00	9	0.80	11
06/07 - HOLDING CELL	Barracks sleeping areas	5.00	1.00	0.06	65	9		1.00	9	0.80	11
06/08 - RR STAFF	Corridors	0.00	0.00	0.06	60	4		1.00	4	0.80	5
06/10 - JANITOR	Storage rooms	0.00	0.00	0.12	60	7		1.00	7	0.80	9
06/11 - RR INMATE	Corridors	0.00	0.00	0.06	45	3		1.00	3	0.80	3
06/12 - RR INMATE	Corridors	0.00	0.00	0.06	45	3		1.00	3	0.80	3
06/13 - ADA RR INMATE	Corridors	0.00	0.00	0.06	65	4		1.00	4	0.80	5
06/14 - OPEN WATING, ARRESTEE TR	Corridors	0.00	0.00	0.06	535	32		1.00	32	0.80	40
06/15 - OPEN WAITING ARRESTEE TF	Lobbies	7.52	32.00	0.09	390	274		1.00	274	0.80	342
06/16 - OPEN WAITING NEW ARREST	Corridors	0.00	0.00	0.06	595	36		1.00	36	0.80	45
06/17 - ARRESTING OFF WK AREA	Office space	5.00	9.00	0.06	645	84		1.00	84	0.80	105
06/18 - Pre-Booking	Office space	5.00	4.00	0.06	80	25		1.00	25	0.80	31
06/19 - Print	Office space	5.00	0.00	0.06	80	5		1.00	5	0.80	6
06/20 - Storage	Storage rooms	0.00	0.00	0.12	60	7		1.00	7	0.80	9
08/39 - Health Screen	Office space	5.00	4.00	0.06	190	31		1.00	31	0.80	39
AHU-I2		6.19	68.00	0.06	3,605	654			654	er ja vett ere – er krijere tillformegsalta til	817
AHU-I2 - Pre-Booking		6.19	68.00	0.06	3,605	654			654		817
05/01 - SECURE GROUP HOLDING CI	Barracks sleeping areas	5.00	8.00	0.06	200	52		1.00	52	0.80	65
05/02 - HOLDING CELL	Barracks sleeping areas	5.00	3.00	0.06	105	21		1.00	21	0.80	27
05/03 - Plumbing Chase	Corridors	0.00	0.00	0.00	10	0		1.00	0	1.00	
05/04 - Transfer Coordinator	Office space	5.00	1.00	0.06	165	15		1.00	15	0.80	19
05/05 - Safety Vestibule	Corridors	0.00	0.00	0.06	140	8		1.00	8	0.80	10
05/06 - SECURE GROUP HOLDING CI	Barracks sleeping areas	5.00	7.00	0.06	190	46		1.00	46	0.80	58
05/07 - SECURE GROUP HOLDING CI	Barracks sleeping areas	5.00	8.00	0.06	230	54		1.00	54	0.80	67

Project Name: 201254 Collin Co ADF Booking Add Dataset Name: 201254-LOAD.TRC

TRACE® 700 v6.3.5 calculated at 01:01 PM on 04/07/2021 Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 8 of 23

TRACE® 700 v6.3.5 calculated at 01:01 PM on 04/07/2021 Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 7 of 23

Texas Registered Engineering Firm No. F-7489 1255 West 15th Street, Suite 300 - Plano, TX 75075

PH: 469.467.0200 FAX: 469.467.0300 Email: mdengca@md-eng.com Project No.: 201254

MECHANICAL SCHEDULES

**ASHRAE Standard 62.1-2004-2010** 

By MD ENGINEERING

**Ventilation Calculations for Cooling Design** 

System Zone Room	Вох Туре	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-clg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 1	TENTA EN CATAL												
AHU-IO		4,785	4,785	4,785	0	719	- 6		9.00	11.00			0.725
AHU-I0 - Guard & Support Area		4,785	4,785	4,785	0	719							0.725
VRF-01/01 - (Calc 1396)	CENTRE FEW CV	0	0	0	0	0		100					0.000
VRF-01/02 - (Calc 449)		0	0	0	0	0							0.000
VRF-01/03 - (calc 1239)		0	0	0	0	0		4.61					0.000
VRF-01/04 - (calc 548)		0	0	0	0	0							0.000
VRF-01/05 - (calc 1586)	BOOK SOLON	0	0	0	0	0							0.000
VRF-01/06 - (calc 987)		0	0	0	0	0							0.000
VRF-01/07 - (calc 826)		0	0	0	0	0						1-773	0.000
VRF-01/08 - (calc 721)		0	0	0	0	0							0.000
VRF-01/09 - (calc 556)	OHIGH STATES	0	0	0	0	0							0.000
CU-01		0	0	0	0	0							0.000
16/01 - MECH / ELC - 2004	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
16/01B - MECH / ELC - 2004	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
UH-01	2000年4月17日	0	0	0	0	0			LA CASE		1 60	3.36	0.000
10/01 - Mechanical	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
UH-02	Straff Fan CV	0	0	0	0	0	0.156				on:	1450	0.000
15/01 - Vehicle Sallyport	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
UH-03 & 04 & 05	Projectariov = 1	0	0	0	0	0	0.436	1.06	17004	1.00	O.C.		0.000
17/01 - Mechanical	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
UH-06		0	0	0	0	0		1.50			10.00	0.00	0.000
18/01 - Future Finishout	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
UH-07 & 08	arranda propinsi prop	an in temperature of the control of	0	**************************************	O C	0	and the season of the season of	es reconstructions and district	- STANDONNING - CT	PROBABLE TOTAL PLANTS	punctional Face (STN) prolends	an ay an Dhighaine Callery an	0.000
16/01A - BOILER RM	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
UH-09	ne. Sometriel allegation in relation in the problem has been recorded in the problem.		0		rause of the control of the O separation.	0		en mein syntaat nivasion	Com.	Marilland	Working 67, 759, 450	Shirting a least the great annual to	0.000
28/01 - Alternate 1 - shell	Induction	0	0	0	0	0	0.000	0.00	0.00	0.00	0.00	0.00	0.000
UH-10 & 11 & 12		0	0	0	0	0					0.00		0.000
Heat Only		0	0	0	0	0							0.000
01/01 - Court Room	Single Fan CV	720	720	720	0	59	0.082	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I5		720	720	720	0	59			00				1.000
AHU-I5 - Courtroom (IONIZER)		720	720	720	0	59							1.000
08/01 - ADA RR INMATE	Single Fan CV	15	15	15	0	4	0.237	1.00	0.00	1.00	1.00	1.00	1.000
08/02 - RR INMATE	Single Fan CV	10	10	10	0	2	0.237	1.00	0.00	1.00	1.00	1.00	1.000

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**Ventilation Calculations for Cooling Design** 

System Zone Room	Box Type		Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-clg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 1														
08/03 - SECURE HOLDING CI	Single Fan CV	09-966-31705-25100-93	200	200	200	0	34	0.170	1.00	0.00	1.00	1.00	1.00	1.000
08/04 - SECURE HOLDING CI	Single Fan CV		200	200	200	0	34	0.170	1.00	0.00	1.00	1.00	1.00	1.000
08/05 - SECURE HOLDING CI	Single Fan CV		200	200	200	0	34	0.170	1.00	0.00	1.00	1.00	1.00	1.000
08/06 - HOLDING CELL	Single Fan CV		120	120	120	0	20	0.170	1.00	0.00	1.00	1.00	1.00	1.000
08/07 - HOLDING CELL	Single Fan CV		120	120	120	0	20	0.170	1.00	0.00	1.00	1.00	1.00	1.000
08/08 - HOLDING CELL	Single Fan CV		120	120	120	0	20	0.170	1.00	0.00	1.00	1.00	1.00	1.000
08/09 - Detox Cell	Single Fan CV		120	120	120	0	15	0.128	1.00	0.00	1.00	1.00	1.00	1.000
08/10 - DETOX HOLDING CEL	Single Fan CV		220	220	220	0	35	0.159	1.00	0.00	1.00	1.00	1.00	1.000
08/11 - STOR	Single Fan CV		55	55	55	0	7	0.131	1.00	0.00	1.00	1.00	1.00	1.000
08/12 - AFIS/FINGER	Single Fan CV		77	77	77	0	18	0.237	1.00	0.00	1.00	1.00	1.00	1.000
08/13 - HEALTH SCREEN	Single Fan CV		91	91	91	0	31	0.338	1.00	0.00	1.00	1.00	1.00	0.914
08/14 - Female/Male	Single Fan CV		1,448	1,448	1,448	0	561	0.388	1.00	0.00	1.00	1.00	1.00	0.864
08/15 - PRE TRIAL SERVICES	Single Fan CV		275	275	275	0	93	0.337	1.00	0.00	1.00	1.00	1.00	0.914
08/16 - HEALTH EXAM	Single Fan CV		206	206	206	206	69	0.335	1.00	0.00	1.00	1.00	1.00	0.916
08/17 - HEALTH EXAM	Single Fan CV		206	206	206	206	69	0.335	1.00	0.00	1.00	1.00	1.00	0.916
08/18 - RR INMATE	Single Fan CV		10	10	10	0	2	0.237	1.00	0.00	1.00	1.00	1.00	1.000
08/19 - ADA RR INMATE	Single Fan CV		14	14	14	0	3	0.237	1.00	0.00	1.00	1.00	1.00	1.000
08/20 - MENTAL HEALTH SCF	Single Fan CV		119	119	119	119	61	0.507	1.00	0.00	1.00	1.00	1.00	0.744
08/21 - MENTAL HEALTH SCF	Single Fan CV		119	119	119	119	60	0.503	1.00	0.00	1.00	1.00	1.00	0.748
08/22 - MED STO	Single Fan CV		66	66	66	66	33	0.503	1.00	0.00	1.00	1.00	1.00	0.748
08/23 - RR STAFF	Single Fan CV		35	35	35	0	5	0.146	1.00	0.00	1.00	1.00	1.00	1.000
08/24 - INTERVIEW	Single Fan CV		61	61	61	0	15	0.253	1.00	0.00	1.00	1.00	1.00	0.998
08/25 - INTERVIEW	Single Fan CV		61	61	61	0	15	0.253	1.00	0.00	1.00	1.00	1.00	0.998
08/26 - INTERVIEW	Single Fan CV		60	60	60	0	15	0.257	1.00	0.00	1.00	1.00	1.00	0.995
08/27 - SAFETY VEST	Single Fan CV		20	20	20	0	5	0.237	1.00	0.00	1.00	1.00	1.00	1.000
08/28 - CORRIDOR	Single Fan CV		447	447	447	0	106	0.237	1.00	0.00	1.00	1.00	1.00	1.000
08/29 - RR STAFF	Single Fan CV		18	18	18	0	4	0.200	1.00	0.00	1.00	1.00	1.00	1.000
08/30 - RR STAFF	Single Fan CV		15	15	15	0	4	0.237	1.00	0.00	1.00	1.00	1.00	1.000
08/31 - Stair	Single Fan CV		200	200	200	0	16	0.080	1.00	0.00	1.00	1.00	1.00	1.000
08/33 - REC/BOND	Single Fan CV		681	681	681	0	180	0.264	1.00	0.00	1.00	1.00	1.00	0.987
08/40 - BODY SCAN	Single Fan CV		227	227	227	0	26	0.113	1.00	0.00	1.00	1.00	1.00	1.000
08/41 - Plumbing Chase	Single Fan CV		56	56	56	0	3	0.054	1.00	0.00	1.00	1.00	1.00	1.000
08/42 - Plumbing Chase	Single Fan CV		390	390	390	0	21	0.053	1.00	0.00	1.00	1.00	1.00	1.000

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**Ventilation Calculations for Cooling Design** 

		Vpz	Vfan	Vdz	Vpz-min	Voz-clg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type	cfm	cfm	cfm	cfm	cfm							
Alternative 1													
22/19 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/20 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/21 - SEP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
23/13 - STAIR - ST02	Single Fan CV	220	220	220	0	16	0.072	1.00	0.00	1.00	1.00	1.00	1.000
23/06 - Safety Vestibule - 1219	Single Fan CV	164	164	164	0	8	0.047	1.00	0.00	1.00	1.00	1.00	1.000
23/15 - Stair	Single Fan CV	447	447	447	0	16	0.036	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I8		5,292	5,292	5,292	0	2,300	0.00	1100	9.00	2.06	1.00	1.00	0.916
AHU-I8 - Dbl Cells - (SE Pod)		5,292	5,292	5,292	0	2,300							0.916
AHU-I7		0	0	0	0	0							0.000
AHU-I7 - Dayroom for Dbl Cell (SE)		0	0	0	0	0							0.000
24/01 - Dorm 2118	Single Fan CV	230	230	230	0	20	0.087	1.00	0.00	1.00	1.00	1.00	1.000
24/02 - JANITOR	Single Fan CV	50	50	50	0	12	0.240	1.00	0.00	1.00	1.00	1.00	0.910
24/03 - Dorm - 2125	Single Fan CV	230	230	230	0	20	0.087	1.00	0.00	1.00	1.00	1.00	1.000
24/04 - DAYROOM/DINING/TV	Single Fan CV	2,460	2,460	2,460	0	467	0.190	1.00	0.00	1.00	1.00	1.00	0.943
24/05 - STAFF RESTROOM	Single Fan CV	155	155	155	0	4	0.027	1.00	0.00	1.00	1.00	1.00	1.000
24/09 - Dormitory - 2119/2121/	Single Fan CV	930	930	930	0	80	0.086	1.00	0.00	1.00	1.00	1.00	1.000
24/10 - HC Domitory - 2117	Single Fan CV	215	215	215	0	19	0.090	1.00	0.00	1.00	1.00	1.00	1.000
24/11a - Domitory - 2113	Single Fan CV	230	230	230	0	20	0.087	1.00	0.00	1.00	1.00	1.00	1.000
24/12 - Dayroom / Dining / TV	Single Fan CV	605	605	605	0	107	0.176	1.00	0.00	1.00	1.00	1.00	0.957
24/13 - Dorm - 3109	Single Fan CV	245	245	245	0	20	0.080	1.00	0.00	1.00	1.00	1.00	1.000
24/14 - Domitory - 2135/2136/2	Single Fan CV	1,010	1,010	1,010	0	80	0.079	1.00	0.00	1.00	1.00	1.00	1.000
24/15 - JANITOR	Single Fan CV	50	50	50	0	12	0.240	1.00	0.00	1.00	1.00	1.00	0.910
24/16 - Dorm - 3116	Single Fan CV	245	245	245	0	20	0.080	1.00	0.00	1.00	1.00	1.00	1.000
24/17 - CORRIDOR, DORMITO	Single Fan CV	640	640	640	0	147	0.230	1.00	0.00	1.00	1.00	1.00	0.910
24/18 - Domitory - 2134	Single Fan CV	240	240	240	0	19	0.080	1.00	0.00	1.00	1.00	1.00	1.000
24/19a - Domitory - 3104	Single Fan CV	255	255	255	0	20	0.078	1.00	0.00	1.00	1.00	1.00	1.000
24/20 - STAIR - ST03	Single Fan CV	235	235	235	0	16	0.068	1.00	0.00	1.00	1.00	1.00	1.000
24/11b - Domitory - 2111	Single Fan CV	220	220	220	0	20	0.089	1.00	0.00	1.00	1.00	1.00	1.000
24/11c - Storage	Single Fan CV	135	135	135	0	26	0.196	1.00	0.00	1.00	1.00	1.00	0.937
24/11d - storage	Single Fan CV	90	90	90	0	17	0.187	1.00	0.00	1.00	1.00	1.00	0.946
24/19b - Domitory - 3102	Single Fan CV	245	245	245	0	20	0.080	1.00	0.00	1.00	1.00	1.00	1.000
24/19c - Storage	Single Fan CV	120	120	120	0	13	0.110	1.00	0.00	1.00	1.00	1.00	1.000
24/19d - Storage	Single Fan CV	90	90	90	Ö	8	0.093	1.00	0.00	1.00	1.00	1.00	1.000

Project Name: 201254 Collin Co ADF Booking Add Dataset Name: 201254-LOAD.TRC

**ASHRAE Standard 62.1-2004-2010** 

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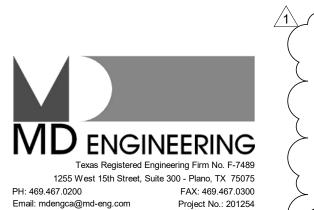
TRACE® 700 v6.3.5 calculated at 01:01 PM on 04/07/2021 Alternative - 1 ASHRAE Standard 62.1-2004/2007 Report Page 12 of 23

Ventilation Calculations for Cooling Design

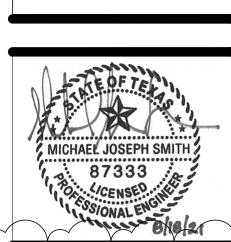
		Vpz	Vfan	Vdz	Vpz-min	Voz-clg	Zd	Ep	Er	Fa	Fb	Fc	Evz	
System Zone Room	Box Type	cfm	cfm	cfm	cfm	cfm	// a		o 15				A Visit	,
Alternative 1														
AHU-I6	,	8,925	8,925	8,925	0	1,186	7.5		100 /				0.910	
AHU-16 - Mens Dorm (N Pod)		8,925	8,925	8,925	0	1,186							0.910	
21/01 - DAYROOM/DINING/T\	Single Fan CV	2,510	2,510	2,510	0	285	0.114	1.00	0.00	1.00	1.00	1.00	0.981	
21/02 - DORMITORY	Single Fan CV	458	458	458	0	40	0.087	1.00	0.00	1.00	1.00	1.00	1.000	
21/05 - STAFF RESTROOM	Single Fan CV	33	33	33	0	5	0.143	1.00	0.00	1.00	1.00	1.00	0.951	
21/07 - STORAGE	Single Fan CV	152	152	152	0	16	0.102	1.00	0.00	1.00	1.00	1.00	0.992	
21/08 - Storage - 2309	Single Fan CV	70	70	70	0	8	0.112	1.00	0.00	1.00	1.00	1.00	0.983	
21/09 - Domitory - 2311	Single Fan CV	236	236	236	0	20	0.086	1.00	0.00	1.00	1.00	1.00	1.000	
21/10 - Dayroom / Showers	Single Fan CV	1,003	1,003	1,003	0	58	0.058	1.00	0.00	1.00	1.00	1.00	1.000	
21/11 - Domitory - 2316/2317	Single Fan CV	458	458	458	0	40	0.087	1.00	0.00	1.00	1.00	1.00	1.000	
21/12 - JC - 2318	Single Fan CV	91	91	91	0	10	0.112	1.00	0.00	1.00	1.00	1.00	0.983	
21/14 - DORMITORY - 2321/2:	Single Fan CV	506	506	506	0	40	0.079	1.00	0.00	1.00	1.00	1.00	1.000	
21/15 - CORRIDOR / Inmate To	Single Fan CV	350	350	350	0	55	0.158	1.00	0.00	1.00	1.00	1.00	0.937	
21/16 - Dormitory - 2325/2326	Single Fan CV	498	498	498	0	40	0.079	1.00	0.00	1.00	1.00	1.00	1.000	
21/17 - JC - 2327	Single Fan CV	52	52	52	0	16	0.301	1.00	0.00	1.00	1.00	1.00	0.849 *	
21/18 - Storage - 2328	Single Fan CV	67	67	67	0	15	0.224	1.00	0.00	1.00	1.00	1.00	0.871	
21/19 - STAIR	Single Fan CV	226	226	226	0	17	0.073	1.00	0.00	1.00	1.00	1.00	1.000	
21/20 - Stair	Single Fan CV	461	461	461	0	17	0.036	1.00	0.00	1.00	1.00	1.00	1.000	
AHU-I9		7,171	7,171	7,171	0	679							0.849	
AHU-I9 - Female Dorm (SW Pod)		7,171	7,171	7,171	0	679							0.849	
13/01 - OFFICER WORK STAT	Single Fan CV	470	470	470	0	25	0.053	1.00	0.00	1.00	1.00	1.00	1.000	
13/02 - CORRIDORS	Single Fan CV	1,110	1,110	1,110	0	116	0.105	1.00	0.00	1.00	1.00	1.00	1.000	
13/03 - MEDICAL Distribution -	Single Fan CV	125	125	125	0	16	0.130	1.00	0.00	1.00	1.00	1.00	1.000	
13/04 - MED Distribution- 2303	Single Fan CV	105	105	105	0	15	0.147	1.00	0.00	1.00	1.00	1.00	1.000	
13/05 - MULTIPURPOSE ROC	Single Fan CV	315	315	315	0	62	0.197	1.00	0.00	1.00	1.00	1.00	0.953	
13/06 - Corridor	Single Fan CV	175	175	175	0	22	0.125	1.00	0.00	1.00	1.00	1.00	1.000	
13/07 - Corridor	Single Fan CV	390	390	390	0	38	0.097	1.00	0.00	1.00	1.00	1.00	1.000	
13/08 - Corridor / SV - 2120/21	Single Fan CV	145	145	145	0	18	0.122	1.00	0.00	1.00	1.00	1.00	1.000	
13/09 - Visit - 2054/2056/2089/	Single Fan CV	540	540	540	0	229	0.425	1.00	0.00	1.00	1.00	1.00	0.725 *	
13/10 - Medical Distribution - 2	Single Fan CV	145	145	145	0	15	0.104	1.00	0.00	1.00	1.00	1.00	1.000	
13/11 - MULTIPURPOSE	Single Fan CV	485	485	485	0	62	0.129	1.00	0.00	1.00	1.00	1.00	1.000	
13/12 - MULTIPURPOSE	Single Fan CV	630	630	630	0	85	0.135	1.00	0.00	1.00	1.00	1.00	1.000	
13/13 - Medical Distribution - 2	Single Fan CV	150	150	150	0	15	0.101	1.00	0.00	1.00	1.00	1.00	1.000	

Project Name: 201254 Collin Co ADF Booking Add 201254-LOAD.TRC

Texas Registered Engineering Firm No. F-7489 1255 West 15th Street, Suite 300 - Plano, TX 75075 FAX: 469.467.0300 PH: 469.467.0200



# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2



SCHEDULES

**ASHRAE Standard 62.1-2004-2010** By MD ENGINEERING

Ventilation Calculations for Heating Design

Cyctom Zono Doore	Day Torre	Vpz	Vfan	Vdz	Vpz-min	Voz-htg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type	cfm	cfm	cfm	cfm	cfm			1 1.				
Alternative 1													
26/01 - SEP CELL	Single Fan CV	150	150	150	0	63	0.421	1.00	0.00	1.00	1.00	1.00	1.000
26/02 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/03 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/04 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/06 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/07 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/08 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/09 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/11 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/12 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/13 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/15 - HC DBL	Single Fan CV	138	138	138	0	71	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/16 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/17 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/18 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/19 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/20 - SEP CELL	Single Fan CV	130	130	130	0	67	0.514	1.00	0.00	1.00	1.00	1.00	0.921
26/21 - SEP CELL	Single Fan CV	123	123	123	0	63	0.514	1.00	0.00	1.00	1.00	1.00	0.921
22/01 - SEP CELL	Single Fan CV	125	125	125	0	58	0.460	1.00	0.00	1.00	1.00	1.00	0.975
22/02 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/03 - SEP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/04 - SEP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/06 - SEP CELL	Single Fan CV	124	124	124	0	61	0.493	1.00	0.00	1.00	1.00	1.00	0.942
22/07 - SEP CELL	Single Fan CV	124	124	124	0	61	0.493	1.00	0.00	1.00	1.00	1.00	0.942
22/08 - SEP CELL	Single Fan CV	124	124	124	0	61	0.493	1.00	0.00	1.00	1.00	1.00	0.942
22/09 - SEP CELL	Single Fan CV	125	125	125	O	61	0.491	1.00	0.00	1.00	1.00	1.00	0.944
22/11 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/12 - SEP CELL	Single Fan CV	111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/13 - SEP CELL	Single Fan CV	119	119	119	0	58	0.483	1.00	0.00	1.00	1.00	1.00	0.951
22/15 - SEP CELL	Single Fan CV	130	130	130	0	65	0.499	1.00	0.00	1.00	1.00	1.00	0.935
22/16 - SEP CELL	Single Fan CV	120	120	120	0	61	0.512	1.00	0.00	1.00	1.00	1.00	0.923
22/17 - ESP CELL	Single Fan CV	111	111	111	0 ,	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/18 - SEP CELL	Single Fan CV	118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916

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**ASHRAE Standard 62.1-2004-2010** 

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Ventilation Calculations for Heating Design

Ventilation Calculations		, = 001;	<del></del>						97-97	0.1	8		1 F	I Ent
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Vpz	Vfan	Vdz	Vpz-min	Voz-htg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type		cfm	cfm	cfm	cfm	cfm						1 112	
Alternative 1														
22/19 - SEP CELL	Single Fan CV		118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/20 - SEP CELL	Single Fan CV		118	118	118	0	61	0.519	1.00	0.00	1.00	1.00	1.00	0.916
22/21 - SEP CELL	Single Fan CV		111	111	111	0	58	0.519	1.00	0.00	1.00	1.00	1.00	0.916
23/13 - STAIR - ST02	Single Fan CV		220	220	220	0	20	0.090	1.00	0.00	1.00	1.00	1.00	1.000
23/06 - Safety Vestibule - 1219	Single Fan CV		164	164	164	0	10	0.059	1.00	0.00	1.00	1.00	1.00	1.000
23/15 - Stair	Single Fan CV		447	447	447	0	20	0.044	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I8			5,292	5,292	5,292	0	2,310							0.916
AHU-18 - Dbl Cells - (SE Pod)			5,292	5,292	5,292	0	2,310							0.916
AHU-I7			0	0	0	0	0							0.000
AHU-I7 - Dayroom for Dbl Cell (SE)			0	0	0	0	0							0.000
24/01 - Dorm 2118	Single Fan CV		230	230	230	0	25	0.108	1.00	0.00	1.00	1.00	1.00	1.000
24/02 - JANITOR	Single Fan CV		50	50	50	0	15	0.300	1.00	0.00	1.00	1.00	1.00	0.850
24/03 - Dorm - 2125	Single Fan CV		230	230	230	0	25	0.108	1.00	0.00	1.00	1.00	1.00	1.000
24/04 - DAYROOM/DINING/TV	Single Fan CV		2,460	2,460	2,460	0	467	0.190	1.00	0.00	1.00	1.00	1.00	0.943
24/05 - STAFF RESTROOM	Single Fan CV		155	155	155	0	5	0.034	1.00	0.00	1.00	1.00	1.00	1.000
24/09 - Dormitory - 2119/2121/:	Single Fan CV		930	930	930	0	100	0.108	1.00	0.00	1.00	1.00	1.00	1.000
24/10 - HC Domitory - 2117	Single Fan CV		215	215	215	0	24	0.112	1.00	0.00	1.00	1.00	1.00	1.000
24/11a - Domitory - 2113	Single Fan CV		230	230	230	0	25	0.108	1.00	0.00	1.00	1.00	1.00	1.000
24/12 - Dayroom / Dining / TV -	Single Fan CV		605	605	605	0	107	0.176	1.00	0.00	1.00	1.00	1.00	0.957
24/13 - Dorm - 3109	Single Fan CV		245	245	245	0	24	0.100	1.00	0.00	1.00	1.00	1.00	1.000
24/14 - Domitory - 2135/2136/2	Single Fan CV		1,010	1,010	1,010	0	100	0.099	1.00	0.00	1.00	1.00	1.00	1.000
24/15 - JANITOR	Single Fan CV		50	50	50	0	15	0.300	1.00	0.00	1.00	1.00	1.00	0.850
24/16 - Dorm - 3116	Single Fan CV		245	245	245	0	24	0.100	1.00	0.00	1.00	1.00	1.00	1.000
24/17 - CORRIDOR, DORMITO			640	640	640	0	147	0.230	1.00	0.00	1.00	1.00	1.00	0.903
24/18 - Domitory - 2134	Single Fan CV		240	240	240	0	24	0.101	1.00	0.00	1.00	1.00	1.00	1.000
24/19a - Domitory - 3104	Single Fan CV		255	255	255	0	25	0.098	1.00	0.00	1.00	1.00	1.00	1.000
24/20 - STAIR - ST03	Single Fan CV		235	235	235	0	20	0.085	1.00	0.00	1.00	1.00	1.00	1.000
24/11b - Domitory - 2111	Single Fan CV		220	220	220	0	24	0.111	1.00	0.00	1.00	1.00	1.00	1.000
24/11c - Storage	Single Fan CV		135	135	135	0	33	0.244	1.00	0.00	1.00	1.00	1.00	0.888
24/11d - storage	Single Fan CV		90	90	90	0	21	0.233	1.00	0.00	1.00	1.00	1.00	0.900
24/19b - Domitory - 3102	Single Fan CV		245	245	245	0	24	0.100	1.00	0.00	1.00	1.00	1.00	1.000
24/19c - Storage	Single Fan CV		120	120	120	0	17	0.138	1.00	0.00	1.00	1.00	1.00	0.995
24/19d - Storage	Single Fan CV		90	90	90	0	10	0.117	1.00	0.00	1.00	1.00	1.00	1.000

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**Ventilation Calculations for Cooling Design** 

			Vpz	Vfan	Vdz	Vpz-min	Voz-clg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type		cfm	cfm	cfm	cfm	cfm							
Alternative 1														
08/44 - Safety Vest	Single Fan CV		244	244	244	0	4	0.016	1.00	0.00	1.00	1.00	1.00	1.000
08/45 - Corridor	Single Fan CV		389	389	389	0	92	0.237	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I1			6,915	6,915	6,915	716	1,737							0.744
AHU-I1 - Booking			6,915	6,915	6,915	716	1,737							0.744
06/01 - SECURE HOLDING	Single Fan CV		193	193	193	0	39	0.200	1.00	0.00	1.00	1.00	1.00	1.000
06/02 - SAFETY VEST	Single Fan CV		60	60	60	0	9	0.149	1.00	0.00	1.00	1.00	1.00	1.000
06/03 - INTOX	Single Fan CV		193	193	193	0	39	0.200	1.00	0.00	1.00	1.00	1.00	1.000
06/04 - HOLDING CELL - HC	Single Fan CV		160	160	160	0	27	0.170	1.00	0.00	1.00	1.00	1.00	1.000
06/05 - HOLDING CELL	Single Fan CV		87	87	87	0	9	0.103	1.00	0.00	1.00	1.00	1.00	1.000
06/06 - HOLDING CELL	Single Fan CV		87	87	87	0	9	0.103	1.00	0.00	1.00	1.00	1.00	1.000
06/07 - HOLDING CELL	Single Fan CV		87	87	87	0	9	0.103	1.00	0.00	1.00	1.00	1.00	1.000
06/08 - RR STAFF	Single Fan CV		15	15	15	0	4	0.236	1.00	0.00	1.00	1.00	1.00	1.000
06/10 - JANITOR	Single Fan CV		15	15	15	0	7	0.473	1.00	0.00	1.00	1.00	1.00	0.797
06/11 - RR INMATE	Single Fan CV		11	11	11	0	3	0.236	1.00	0.00	1.00	1.00	1.00	1.000
06/12 - RR INMATE	Single Fan CV		11	11	11	0	3	0.236	1.00	0.00	1.00	1.00	1.00	1.000
06/13 - ADA RR INMATE	Single Fan CV		17	17	17	0	4	0.236	1.00	0.00	1.00	1.00	1.00	1.000
06/14 - OPEN WATING, ARRE:	Single Fan CV		136	136	136	0	32	0.236	1.00	0.00	1.00	1.00	1.00	1.000
06/15 - OPEN WAITING ARRE	Single Fan CV		464	464	464	0	274	0.590	1.00	0.00	1.00	1.00	1.00	0.680
06/16 - OPEN WAITING NEW	Single Fan CV		162	162	162	0	36	0.220	1.00	0.00	1.00	1.00	1.00	1.000
06/17 - ARRESTING OFF WK	Single Fan CV		484	484	484	0	84	0.173	1.00	0.00	1.00	1.00	1.00	1.000
06/18 - Pre-Booking	Single Fan CV		66	66	66	0	25	0.376	1.00	0.00	1.00	1.00	1.00	0.894
06/19 - Print	Single Fan CV		67	67	67	0	5	0.072	1.00	0.00	1.00	1.00	1.00	1.000
06/20 - Storage	Single Fan CV	et antage time transfer	15	15	15	0	7	0.473	1.00	0.00	1.00	1.00	1.00	0.797
08/39 - Health Screen	Single Fan CV		94	94	94	0	31	0.334	1.00	0.00	1.00	1.00	1.00	0.935
AHU-I2	en teknings lysse tropffann aksy re. Stoppen fan antyn		2,425	2,425	2,425	terefolia de Las Sala (	654		eriot tax realist concentrations		and the state of t	т — пус. 124 Сераткурскі коюзі (тві	gerfaller av fa <sup>2</sup> en en en en en en	0.680
AHU-I2 - Pre-Booking			2,425	2,425	2,425	0	654							0.680
05/01 - SECURE GROUP HOL	Single Fan CV		265	265	265	0	52	0.196	1.00	0.00	1.00	1.00	1.00	1.000
05/02 - HOLDING CELL	Single Fan CV		140	140	140	0	21	0.152	1.00	0.00	1.00	1.00	1.00	1.000
05/03 - Plumbing Chase	Single Fan CV		0	0	0	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
05/04 - Transfer Coordinator	Single Fan CV		355	355	355	0	15	0.042	1.00	0.00	1.00	1.00	1.00	1.000
05/05 - Safety Vestibule	Single Fan CV		120	120	120	0	8	0.070	1.00	0.00	1.00	1.00	1.00	1.000
05/06 - SECURE GROUP HOL	Single Fan CV		265	265	265	0	46	0.175	1.00	0.00	1.00	1.00	1.00	1.000
05/07 - SECURE GROUP HOL	Single Fan CV		305	305	305	0	54	0.176	1.00	0.00	1.00	1.00	1.00	1.000

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**Ventilation Calculations for Cooling Design** 

Project Name: 201254 Collin Co ADF Booking Add Dataset Name: 201254-LOAD.TRC

System Zone Room	Box Type	Vpz cfm	Vfan cfm	Vdz cfm	Vpz-min cfm	Voz-clg cfm	Zd	Ep	Er	Fa	Fb	Fc	Evz
Alternative 1													
05/08 - HOLDING CELL	Single Fan CV	125	125	125	0	21	0.166	1.00	0.00	1.00	1.00	1.00	1.000
05/09 - HOLDING CELL	Single Fan CV	125	125	125	0	21	0.166	1.00	0.00	1.00	1.00	1.00	1.000
05/10 - HC HOLDING CELL	Single Fan CV	155	155	155	0	27	0.174	1.00	0.00	1.00	1.00	1.00	1.000
05/11 - HOLDING CELL	Single Fan CV	135	135	135	0	21	0.156	1.00	0.00	1.00	1.00	1.00	1.000
05/12 - OPEN WAITING TRAN	Single Fan CV	2,745	2,745	2,745	0	1,452	0.529	1.00	0.00	1.00	1.00	1.00	0.811
05/13 - Female Changing	Single Fan CV	150	150	150	0	14	0.092	1.00	0.00	1.00	1.00	1.00	1.000
05/14 - Janitor	Single Fan CV	0	0	0	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
05/15 - Male Changing	Single Fan CV	150	150	150	0	14	0.094	1.00	0.00	1.00	1.00	1.00	1.000
05/16 - Plumbing Chase	Single Fan CV	0	0	0	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
06/09 - SAFETY VESTIBLUE	Single Fan CV	175	175	175	0	3	0.017	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I3		5,210	5,210	5,210	0	1,769							0.811
AHU-I3 - Transfer Area		5,210	5,210	5,210	0	1,769						40	0.811
04/01 - PROPERTY STORAGE	Single Fan CV	11,808	11,808	11,808	0	5,904	0.500	1.00	0.00	1.00	1.00	1.00	0.998
04/02 - JAIL CLOTHING STOF	Single Fan CV	990	990	990	0	495	0.500	1.00	0.00	1.00	1.00	1.00	0.998
04/03 - JANITOR	Single Fan CV	40	40	40	0	5	0.135	1.00	0.00	1.00	1.00	1.00	1.000
04/04 - Val Prop Storage	Single Fan CV	468	468	468	0	234	0.500	1.00	0.00	1.00	1.00	1.00	0.998
04/05 - Laundry	Single Fan CV	40	40	40	0	8	0.195	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I4		13,346	13,346	13,346	0	6,646							0.998
AHU-I4 - Prop Stor - (50% OSA)		13,346	13,346	13,346	0	6,646							0.998
VRF-02/01 - 02		0	0	0	0	0							0.000
VRF-02/04 (assumed 2T Future I7		0	0	0	0	0							0.000
VRF-02/05		0	0	0	0	0							0.000
VRF-02/03 (assumed 2T Future I7		0	0	0	0	0							0.000
CU-02		0	0	0	0	0							0.000
VRF-03/01 - (calc 732)		0	0	0	0	0							0.000
CU-03		0	0	0	0	0							0.000
VRF-04/01		0	0	0	0	0							0.000
VRF-04/02		0	0	0	0	0							0.000
CU-04		0	0	0	0 '	0							0.000

Project Name: 201254 Collin Co ADF Booking Add

Dataset Name: 201254-LOAD.TRC

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Email: mdengca@md-eng.com Project No.: 201254

HISTORY # DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2

MICHAEL JOSEPH SMITH

SCHEDULES

**ASHRAE Standard 62.1-2004-2010** 

By MD ENGINEERING

**Ventilation Calculations for Heating Design** 

		Vpz	Vfan	Vdz	Vpz-min	Voz-htg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type	cfm	cfm	cfm	cfm	cfm		7.					
Alternative 1												014.400	
08/03 - SECURE HOLDING CE	Single Fan CV	200	200	200	0	43	0.213	1.00	0.00	1.00	1.00	1.00	1.000
08/04 - SECURE HOLDING CI	Single Fan CV	200	200	200	0	43	0.213	1.00	0.00	1.00	1.00	1.00	1.000
08/05 - SECURE HOLDING CE	Single Fan CV	200	200	200	0	43	0.213	1.00	0.00	1.00	1.00	1.00	1.000
08/06 - HOLDING CELL	Single Fan CV	120	120	120	0	26	0.213	1.00	0.00	1.00	1.00	1.00	1.000
08/07 - HOLDING CELL	Single Fan CV	120	120	120	0	26	0.213	1.00	0.00	1.00	1.00	1.00	1.000
08/08 - HOLDING CELL	Single Fan CV	120	120	120	0	26	0.213	1.00	0.00	1.00	1.00	1.00	1.000
08/09 - Detox Cell	Single Fan CV	120	120	120	0	19	0.160	1.00	0.00	1.00	1.00	1.00	1.000
08/10 - DETOX HOLDING CEL	Single Fan CV	220	220	220	0	44	0.198	1.00	0.00	1.00	1.00	1.00	1.000
08/11 - STOR	Single Fan CV	55	55	55	0	9	0.163	1.00	0.00	1.00	1.00	1.00	1.000
08/12 - AFIS/FINGER	Single Fan CV	77	77	77	0	23	0.296	1.00	0.00	1.00	1.00	1.00	0.955
08/13 - HEALTH SCREEN	Single Fan CV	91	91	91	0	39	0.422	1.00	0.00	1.00	1.00	1.00	0.829
08/14 - Female/Male	Single Fan CV	1,448	1,448	1,448	0	701	0.484	1.00	0.00	1.00	1.00	1.00	0.767
08/15 - PRE TRIAL SERVICES	Single Fan CV	275	275	275	0	116	0.421	1.00	0.00	1.00	1.00	1.00	0.830
08/16 - HEALTH EXAM	Single Fan CV	206	206	206	206	86	0.419	1.00	0.00	1.00	1.00	1.00	0.832
08/17 - HEALTH EXAM	Single Fan CV	206	206	206	206	86	0.419	1.00	0.00	1.00	1.00	1.00	0.832
08/18 - RR INMATE	Single Fan CV	10	10	10	0	3	0.296	1.00	0.00	1.00	1.00	1.00	0.955
08/19 - ADA RR INMATE	Single Fan CV	14	14	14	0	4	0.296	1.00	0.00	1.00	1.00	1.00	0.955
08/20 - MENTAL HEALTH SCF	Single Fan CV	119	119	119	119	76	0.634	1.00	0.00	1.00	1.00	1.00	0.617
08/21 - MENTAL HEALTH SCF	Single Fan CV	119	119	119	119	75	0.628	1.00	0.00	1.00	1.00	1.00	0.623
08/22 - MED STO	Single Fan CV	66	66	66	66	41	0.628	1.00	0.00	1.00	1.00	1.00	0.623
08/23 - RR STAFF	Single Fan CV	35	35	35	0	6	0.183	1.00	0.00	1.00	1.00	1.00	1.000
08/24 - INTERVIEW	Single Fan CV	61	61	61	0	19	0.316	1.00	0.00	1.00	1.00	1.00	0.935
08/25 - INTERVIEW	Single Fan CV	61	61	61	0	19	0.316	1.00	0.00	1.00	1.00	1.00	0.935
08/26 - INTERVIEW	Single Fan CV	60	60	60	0	19	0.321	1.00	0.00	1.00	1.00	1.00	0.931
08/27 - SAFETY VEST	Single Fan CV	20	20	20	0	6	0.296	1.00	0.00	1.00	1.00	1.00	0.955
08/28 - CORRIDOR	Single Fan CV	447	447	447	0	132	0.296	1.00	0.00	1.00	1.00	1.00	0.955
08/29 - RR STAFF	Single Fan CV	18	18	18	0	5	0.249	1.00	0.00	1.00	1.00	1.00	1.000
08/30 - RR STAFF	Single Fan CV	15	15	15	0	5	0.296	1.00	0.00	1.00	1.00	1.00	0.955
08/31 - Stair	Single Fan CV	200	200	200	0	20	0.099	1.00	0.00	1.00	1.00	1.00	1.000
08/33 - REC/BOND	Single Fan CV	681	681	681	0	225	0.330	1.00	0.00	1.00	1.00	1.00	0.921
08/40 - BODY SCAN	Single Fan CV	227	227	227	0	32	0.141	1.00	0.00	1.00	1.00	1.00	1.000
08/41 - Plumbing Chase	Single Fan CV	56	56	56	0	4	0.067	1.00	0.00	1.00	1.00	1.00	1.000
08/42 - Plumbing Chase	Single Fan CV	390	390	390	0	26	0.066	1.00	0.00	1.00	1.00	1.00	1.000

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**Ventilation Calculations for Heating Design** 

		Vpz	Vfan		Vdz	Vpz-n		Voz-htg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type	cfm	cfm		cfm	cfr	m	cfm					4	n H	
Alternative 1															
08/44 - Safety Vest	Single Fan CV	244	244		244		0	5	0.020	1.00	0.00	1.00	1.00	1.00	1.000
08/45 - Corridor	Single Fan CV	389	389		389		0	115	0.296	1.00	0.00	1.00	1.00	1.00	0.955
AHU-I1		6,915	6,915	(	5,915	71	6	2,171							0.617
AHU-I1 - Booking		6,915	6,915	6	5,915	71	6	2,171							0.617
06/01 - SECURE HOLDING	Single Fan CV	193	193		193		0	48	0.250	1.00	0.00	1.00	1.00	1.00	1.000
06/02 - SAFETY VEST	Single Fan CV	60	60		60		0	11	0.186	1.00	0.00	1.00	1.00	1.00	1.000
06/03 - INTOX	Single Fan CV	193	193		193		0	48	0.250	1.00	0.00	1.00	1.00	1.00	1.000
06/04 - HOLDING CELL - HC	Single Fan CV	160	160		160		0	34	0.213	1.00	0.00	1.00	1.00	1.00	1.000
06/05 - HOLDING CELL	Single Fan CV	87	87		87		0	11	0.128	1.00	0.00	1.00	1.00	1.00	1.000
06/06 - HOLDING CELL	Single Fan CV	87	87		87		0	11	0.128	1.00	0.00	1.00	1.00	1.00	1.000
06/07 - HOLDING CELL	Single Fan CV	87	87		87		0	11	0.128	1.00	0.00	1.00	1.00	1.00	1.000
06/08 - RR STAFF	Single Fan CV	15	15		15		0	5	0.295	1.00	0.00	1.00	1.00	1.00	0.974
06/10 - JANITOR	Single Fan CV	15	15		15		0	9	0.591	1.00	0.00	1.00	1.00	1.00	0.679
06/11 - RR INMATE	Single Fan CV	11	11		11		0	3	0.295	1.00	0.00	1.00	1.00	1.00	0.974
06/12 - RR INMATE	Single Fan CV	11	11		11		0	3	0.295	1.00	0.00	1.00	1.00	1.00	0.974
06/13 - ADA RR INMATE	Single Fan CV	17	17		17		0	5	0.295	1.00	0.00	1.00	1.00	1.00	0.974
06/14 - OPEN WATING, ARRES	Single Fan CV	136	136		136		0	40	0.295	1.00	0.00	1.00	1.00	1.00	0.974
06/15 - OPEN WAITING ARRE	Single Fan CV	464	464		464		0	342	0.737	1.00	0.00	1.00	1.00	1.00	0.532
06/16 - OPEN WAITING NEW	Single Fan CV	162	162		162		0	45	0.275	1.00	0.00	1.00	1.00	1.00	0.995
06/17 - ARRESTING OFF WK	Single Fan CV	484	484		484		0	105	0.216	1.00	0.00	1.00	1.00	1.00	1.000
06/18 - Pre-Booking	Single Fan CV	66	66		66		0	31	0.470	1.00	0.00	1.00	1.00	1.00	0.800
06/19 - Print	Single Fan CV	67	67		67		0	6	0.089	1.00	0.00	1.00	1.00	1.00	1.000
06/20 - Storage	Single Fan CV	15	15		15		0	9	0.591	1.00	0.00	1.00	1.00	1.00	0.679
08/39 - Health Screen	Single Fan CV	94	94		94		0	39	0.418	1.00	0.00	1.00	1.00	1.00	0.852
AHU-I2		2,425	2,425		2,425		0	817						40	0.532
AHU-I2 - Pre-Booking		2,425	2,425		2,425		0	817							0.532
05/01 - SECURE GROUP HOL	Single Fan CV	265	265		265		0	65	0.245	1.00	0.00	1.00	1.00	1.00	1.000
05/02 - HOLDING CELL	Single Fan CV	140	140		140		0	27	0.190	1.00	0.00	1.00	1.00	1.00	1.000
05/03 - Plumbing Chase	Single Fan CV	0	0		0		0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
05/04 - Transfer Coordinator	Single Fan CV	355	355		355		0	19	0.052	1.00	0.00	1.00	1.00	1.00	1.000
05/05 - Safety Vestibule	Single Fan CV	120	120		120		0	10	0.088	1.00	0.00	1.00	1.00	1.00	1.000
05/06 - SECURE GROUP HOL	_	265	265		265	4	0	58	0.219	1.00	0.00	1.00	1.00	1.00	1.000
05/07 - SECURE GROUP HOL	•	305	305		305		0	67	0.220	1.00	0.00	1.00	1.00	1.00	1.000

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		Vpz	Vfan	Vdz	Vpz-min	Voz-htg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type	cfm	cfm	cfm	cfm	cfm							
Alternative 1													
AHU-I6		8,925	8,925	8,925	0	1,303		Section Control Section Con		A DE PRODUCTION DE L'ARREST DE CONTRACTOR DE			0.850
AHU-l6 - Mens Dorm (N Pod)		8,925	8,925	8,925	0	1,303							0.850
21/01 - DAYROOM/DINING/TV	Single Fan CV	2,510	2,510	2,510	0	285	0.114	1.00	0.00	1.00	1.00	1.00	0.98
21/02 - DORMITORY	Single Fan CV	458	458	458	0	50	0.109	1.00	0.00	1.00	1.00	1.00	0.986
21/05 - STAFF RESTROOM	Single Fan CV	33	33	33	0	6	0.179	1.00	0.00	1.00	1.00	1.00	0.915
21/07 - STORAGE	Single Fan CV	152	152	152	0	19	0.128	1.00	0.00	1.00	1.00	1.00	0.967
21/08 - Storage - 2309	Single Fan CV	70	70	70	0	10	0.140	1.00	0.00	1.00	1.00	1.00	0.955
21/09 - Domitory - 2311	Single Fan CV	236	236	236	0	25	0.107	1.00	0.00	1.00	1.00	1.00	0.988
21/10 - Dayroom / Showers	Single Fan CV	1,003	1,003	1,003	0	72	0.072	1.00	0.00	1.00	1.00	1.00	1.000
21/11 - Domitory - 2316/2317	Single Fan CV	458	458	458	0	50	0.109	1.00	0.00	1.00	1.00	1.00	0.986
21/12 - JC - 2318	Single Fan CV	91	91	91	0	13	0.140	1.00	0.00	1.00	1.00	1.00	0.955
21/14 - DORMITORY - 2321/23	Single Fan CV	506	506	506	0	50	0.098	1.00	0.00	1.00	1.00	1.00	0.996
21/15 - CORRIDOR / Inmate To	Single Fan CV	350	350	350	0	69	0.197	1.00	0.00	1.00	1.00	1.00	0.898
21/16 - Dormitory - 2325/2326	Single Fan CV	498	498	498	0	49	0.099	1.00	0.00	1.00	1.00	1.00	0.996
21/17 - JC - 2327	Single Fan CV	52	52	52	0	19	0.376	1.00	0.00	1.00	1.00	1.00	0.774
21/18 - Storage - 2328	Single Fan CV	67	67	67	0	19	0.280	1.00	0.00	1.00	1.00	1.00	0.814
21/19 - STAIR	Single Fan CV	226	226	226	0	21	0.091	1.00	0.00	1.00	1.00	1.00	1.000
21/20 - Stair	Single Fan CV	461	461	461	0	21	0.045	1.00	0.00	1.00	1.00	1.00	1.000
AHU-19	and the contract of the contra	7,171	7,171	7,171	0	778							0.774
AHU-I9 - Female Dorm (SW Pod)		7,171	7,171	7,171	0	778							0.774
13/01 - OFFICER WORK STAT	Single Fan CV	470	470	470	0	31	0.066	1.00	0.00	1.00	1.00	1.00	1.000
13/02 - CORRIDORS	Single Fan CV	1,110	1,110	1,110	0	145	0.131	1.00	0.00	1.00	1.00	1.00	1.000
13/03 - MEDICAL Distribution -	Single Fan CV	125	125	125	0	20	0.163	1.00	0.00	1.00	1.00	1.00	0.987
13/04 - MED Distribution- 2303	Single Fan CV	105	105	105	0	19	0.183	1.00	0.00	1.00	1.00	1.00	0.96
13/05 - MULTIPURPOSE ROO	Single Fan CV	315	315	315	0	78	0.246	1.00	0.00	1.00	1.00	1.00	0.904
13/06 - Corridor	Single Fan CV	175	175	175	0	27	0.156	1.00	0.00	1.00	1.00	1.00	0.994
13/07 - Corridor	Single Fan CV	390	390	390	0	47	0.121	1.00	0.00	1.00	1.00	1.00	1.000
13/08 - Corridor / SV - 2120/21	Single Fan CV	145	145	145	0	22	0.153	1.00	0.00	1.00	1.00	1.00	0.998
13/09 - Visit - 2054/2056/2089/	Single Fan CV	540	540	540	0	287	0.531	1.00	0.00	1.00	1.00	1.00	0.619
13/10 - Medical Distribution - 2	Single Fan CV	145	145	145	0	19	0.130	1.00	0.00	1.00	1.00	1.00	1.000
13/11 - MULTIPURPOSE	Single Fan CV	485	485	485	0	78	0.161	1.00	0.00	1.00	1.00	1.00	0.98
13/12 - MULTIPURPOSE	Single Fan CV	630	630	630	0	106	0.168	1.00	0.00	1.00	1.00	1.00	0.982
13/13 - Medical Distribution - 2:	Single Fan CV	150	150	150	0	19	0.126	1.00	0.00	1.00	1.00	1.00	1.000

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**Ventilation Calculations for Heating Design** 

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Ventilation Calculations for Heating Design

	8	Vpz	Vfan	Vdz	Vpz-min	Voz-htg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type	cfm	cfm	cfm	cfm	cfm	12 21					81	24.0
Alternative 1													
AHU-I0	afer an art - Wegan	4,785	4,785	4,785	0	899							0.619
AHU-I0 - Guard & Support Area		4,785	4,785	4,785	0	899							0.619
VRF-01/01 - (Calc 1396)		0	0	0	0	0							0.000
VRF-01/02 - (Calc 449)		0	0	0	0	0							0.000
VRF-01/03 - (calc 1239)		0	0	0	0	0							0.000
VRF-01/04 - (calc 548)	*	0	0	0	0	0							0.000
VRF-01/05 - (calc 1586)		0	0	0	0	0							0.000
VRF-01/06 - (calc 987)		0	0	0	0	0							0.000
VRF-01/07 - (calc 826)		0	0	0	0	0							0.000
VRF-01/08 - (calc 721)		0	0	0	0	0							0.000
VRF-01/09 - (calc 556)		0	0	0	0	0							0.000
CU-01		0	0	0	0	0							0.000
16/01 - MECH / ELC - 2004	Single Fan CV	129	129	129	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
16/01B - MECH / ELC - 2004	Single Fan CV	15	15	15	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
UH-01	ovida i di con e	144	144	144	0	0							1.000
10/01 - Mechanical	Single Fan CV	15	15	15	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
UH-02		15	15	15	0	0							1.000
15/01 - Vehicle Sallyport	Single Fan CV	967	967	967	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
UH-03 & 04 & 05		967	967	967	0	0							1.000
17/01 - Mechanical	Single Fan CV	20	20	20	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
UH-06		20	20	20	0	0							1.000
18/01 - Future Finishout	Single Fan CV	40	40	40	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
UH-07 & 08		40	40	40	0	0							1.000
16/01A - BOILER RM	Single Fan CV	7	7	7	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
UH-09		7	7	7	0	0							1.000
28/01 - Alternate 1 - shell	Single Fan CV	105	105	105	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
UH-10 & 11 & 12		105	105	105	0	0							1.000
Heat Only		1,298	1,298	1,298	0	0							1.000
01/01 - Court Room	Single Fan CV	720	720	720	0	74	0.103	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I5	errore <del>T</del> ore organic C C	720	720	720	0	74							1.000
AHU-I5 - Courtroom (IONIZER)		720	720	720	0	74							1.000
08/01 - ADA RR INMATE	Single Fan CV	15	15	15	0	5	0.296	1.00	0.00	1.00	1.00	1.00	0.955
08/02 - RR INMATE	Single Fan CV	10	10	10	0	3	0.296	1.00	0.00	1.00	1.00	1.00	0.955

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Email: mdengca@md-eng.com Project No.: 201254

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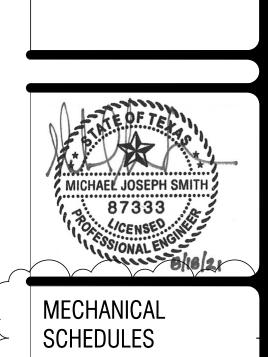
**Ventilation Calculations for Heating Design** 

		Vpz	Vfan	Vdz	Vpz-min	Voz-htg	Zd	Ep	Er	Fa	Fb	Fc	Evz
System Zone Room	Box Type	cfm	cfm	cfm	cfm	cfm	% <u>III II II I</u>						
Alternative 1													
05/08 - HOLDING CELL	Single Fan CV	125	125	125	0	26	0.207	1.00	0.00	1.00	1.00	1.00	1.000
05/09 - HOLDING CELL	Single Fan CV	125	125	125	0	26	0.207	1.00	0.00	1.00	1.00	1.00	1.000
05/10 - HC HOLDING CELL	Single Fan CV	155	155	155	0	34	0.217	1.00	0.00	1.00	1.00	1.00	1.000
05/11 - HOLDING CELL	Single Fan CV	135	135	135	0	26	0.194	1.00	0.00	1.00	1.00	1.00	1.000
05/12 - OPEN WAITING TRAN	Single Fan CV	2,745	2,745	2,745	0	1,815	0.661	1.00	0.00	1.00	1.00	1.00	0.678
05/13 - Female Changing	Single Fan CV	150	150	150	0	17	0.115	1.00	0.00	1.00	1.00	1.00	1.000
05/14 - Janitor	Single Fan CV	0	0	0	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
05/15 - Male Changing	Single Fan CV	150	150	150	0	18	0.118	1.00	0.00	1.00	1.00	1.00	1.000
05/16 - Plumbing Chase	Single Fan CV	0	0	0	0	0	0.000	1.00	0.00	1.00	1.00	1.00	1.000
06/09 - SAFETY VESTIBLUE	Single Fan CV	175	175	175	0	4	0.021	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I3		5,210	5,210	5,210	0	2,211							0.678
AHU-I3 - Transfer Area		5,210	5,210	5,210	0	2,211							0.678
04/01 - PROPERTY STORAGE	Single Fan CV	11,808	11,808	11,808	0	5,904	0.500	1.00	0.00	1.00	1.00	1.00	0.998
04/02 - JAIL CLOTHING STOR	Single Fan CV	990	990	990	0	495	0.500	1.00	0.00	1.00	1.00	1.00	0.998
04/03 - JANITOR	Single Fan CV	40	40	40	0	7	0.169	1.00	0.00	1.00	1.00	1.00	1.000
04/04 - Val Prop Storage	Single Fan CV	468	468	468	0	234	0.500	1.00	0.00	1.00	1.00	1.00	0.998
04/05 - Laundry	Single Fan CV	40	40	40	0	10	0.244	1.00	0.00	1.00	1.00	1.00	1.000
AHU-I4		13,346	13,346	13,346	0	6,650							0.998
AHU-I4 - Prop Stor - (50% OSA)		13,346	13,346	13,346	0	6,650							0.998
VRF-02/01 - 02		0	0	0	0	0							0.000
VRF-02/04 (assumed 2T Future IT		0	0	0	0	0							0.000
VRF-02/05		0	0	0	0	0							0.000
VRF-02/03 (assumed 2T Future IT		0	0	0	0	0							0.000
CU-02		0	0	0	0	0							0.000
VRF-03/01 - (calc 732)		0	0	0	0	0							0.000
CU-03		0	0	0	0	0							0.000
VRF-04/01		0	0	0	0	0							0.000
VRF-04/02		0	0	0	0	0							0.000
CU-04		0	0	0	0	0							0.000

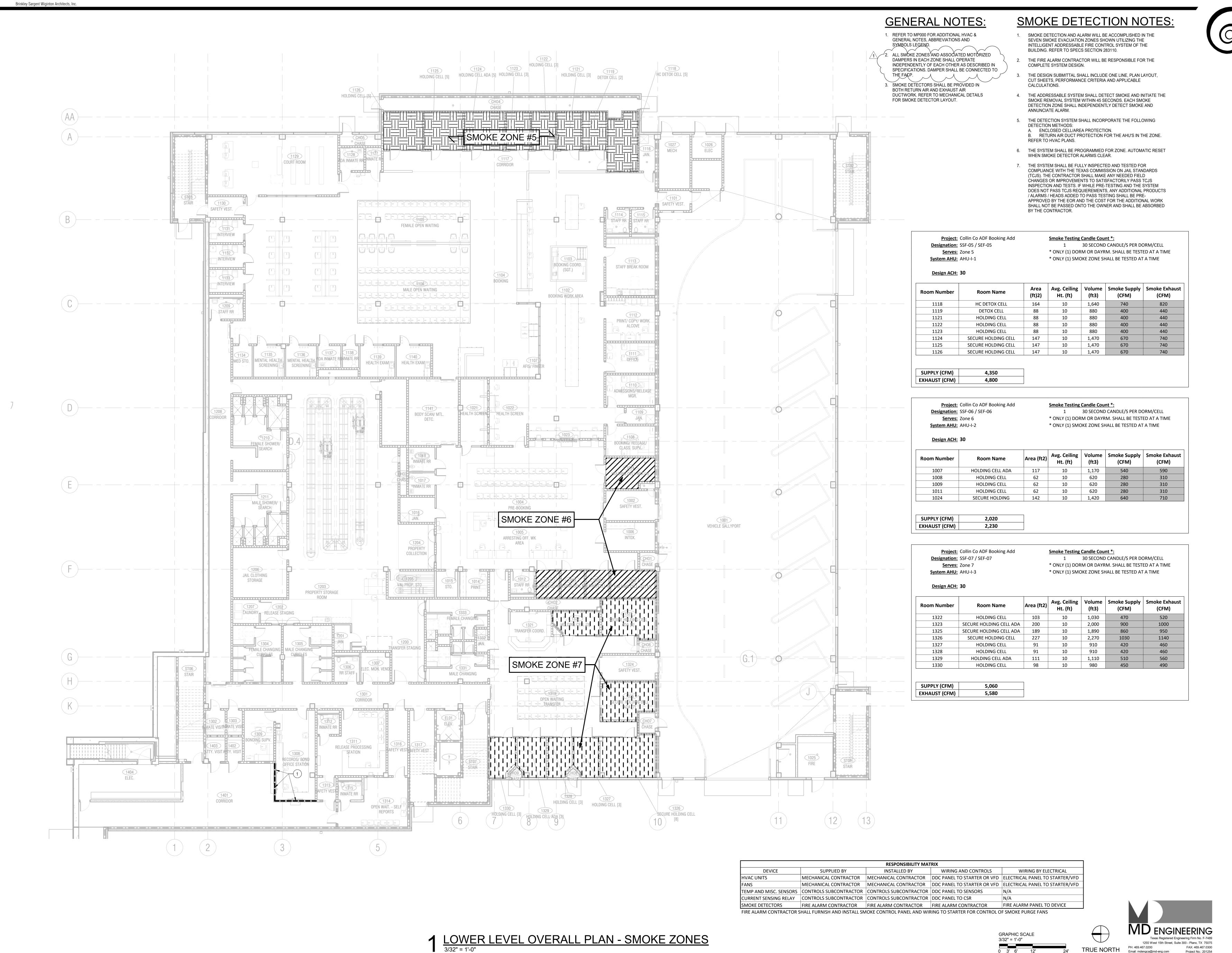
Project Name: 201254 Collin Co ADF Booking Add Dataset Name: 201254-LOAD.TRC

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# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2



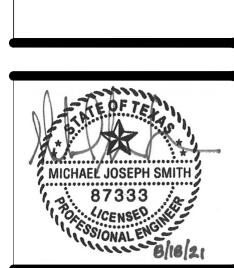
Texas Registered Engineering Firm No. F-7489
1255 West 15th Street, Suite 300 - Plano, TX 75075
PH: 469.467.0200 FAX: 469.467.0300
Email: mdengca@md-eng.com Project No.: 201254



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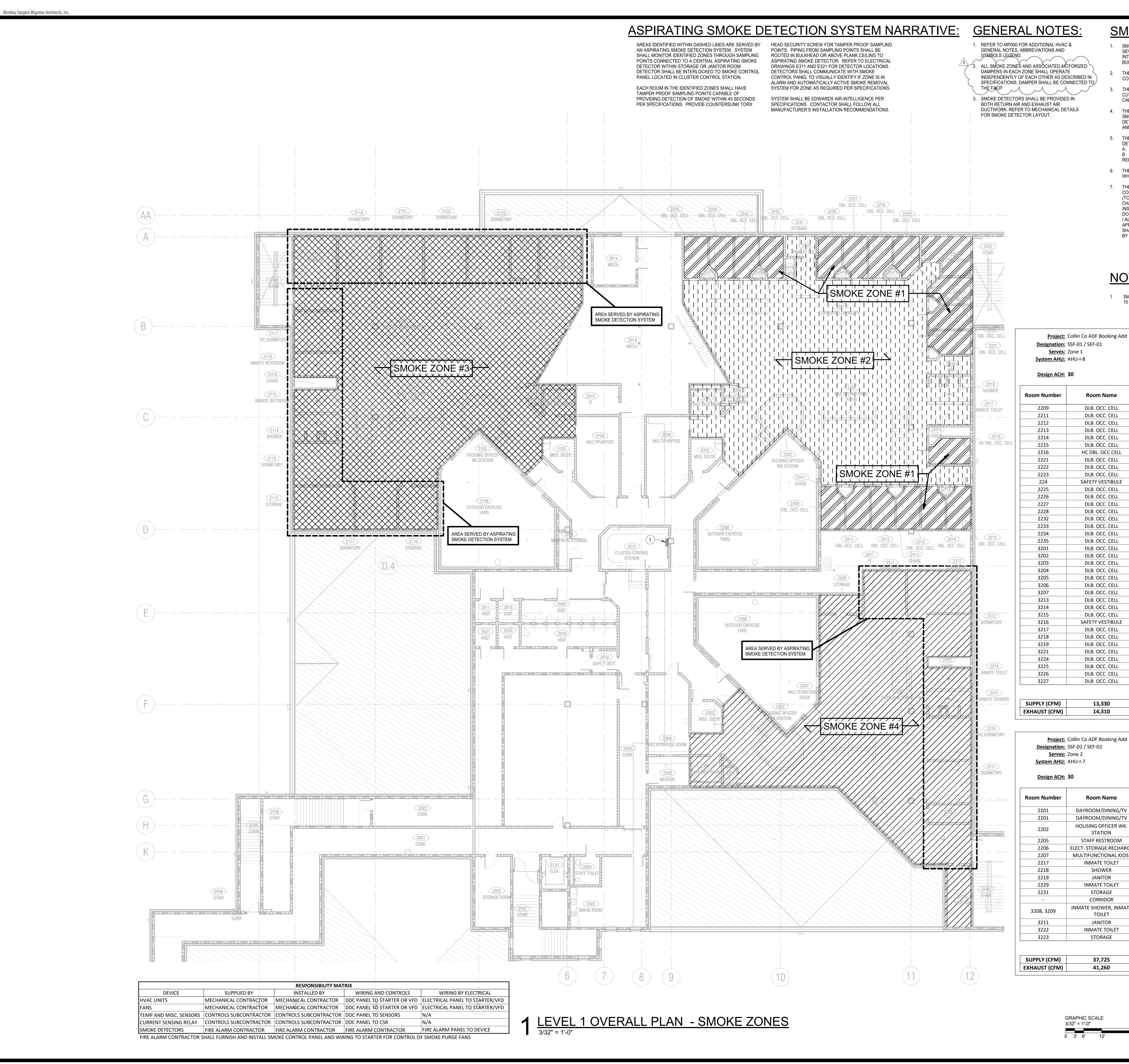
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# DATE DESCRIPTION 1 08.18.2021 ADDENDUM #2



LOWER LEVEL OVERALL PLAN SMOKE ZONES

PH: 469.467.0200 Email: mdengca@md-eng.com Project No.: 201254



# **SMOKE DETECTION NOTES:**

- 1. SMOKE DETECTION AND ALARM WILL BE ACCOMPLISHED IN THE SEVEN SMOKE EVACUATION ZONES SHOWN UTILIZING THE
- INTELLIGENT ADDRESSABLE FIRE CONTROL SYSTEM OF THE BUILDING. REFER TO SPECS SECTION 283110.
- THE FIRE ALARM CONTRACTOR WILL BE RESPONSIBLE FOR THE COMPLETE SYSTEM DESIGN.
- THE DESIGN SUBMITTAL SHALL INCLUDE ONE LINE, PLAN LAYOUT, CUT SHEETS, PERFORMANCE CRITERIA AND APPLICABLE CALCULATIONS.
- 4. THE ADDRESSABLE SYSTEM SHALL DETECT SMOKE AND INITIATE THE SMOKE REMOVAL SYSTEM WITHIN 45 SECONDS. EACH SMOKE DETECTION ZONE SHALL INDEPENDENTLY DETECT SMOKE AND ANNUNCIATE ALARM.
- 5. THE DETECTION SYSTEM SHALL INCORPORATE THE FOLLOWING **DETECTION METHODS:** A. ENCLOSED CELL/AREA PROTECTION. B. RETURN AIR DUCT PROTECTION FOR THE AHU'S IN THE ZONE.
- REFER TO HVAC PLANS. 6. THE SYSTEM SHALL BE PROGRAMMED FOR ZONE. AUTOMATIC RESET
- WHEN SMOKE DETECTOR ALARMS CLEAR. 7. THE SYSTEM SHALL BE FULLY INSPECTED AND TESTED FOR COMPLIANCE WITH THE TEXAS COMMISSION ON JAIL STANDARDS (TCJS). THE CONTRACTOR SHALL MAKE ANY NEEDED FIELD CHANGES OR IMPROVEMENTS TO SATISFACTORILY PASS TCJS INSPECTION AND TESTS. IF WHILE PRE-TESTING AND THE SYSTEM DOES NOT PASS TCJS REQUIEREMENTS, ANY ADDITIONAL PRODUCTS / ALARMS / HEADS ADDED TO PASS TESTING SHALL BE PRE-APPROVED BY THE EOR AND THE COST FOR THE ADDITIONAL WORK SHALL NOT BE PASSED ONTO THE OWNER AND SHALL BE ABSORBED

# NOTES BY SYMBOL

BY THE CONTRACTOR.

1 SMOKE CONTROL PANEL. REFER TO SPECIFICATIONS SECTIONS 28 31 10 FOR PANEL REQUIREMENTS.

> **Smoke Testing Candle Count \*:** 1 30 SECOND CANDLE/S PER DORM/CELL \* ONLY (1) DORM OR DAYRM. SHALL BE TESTED AT A TIME \* ONLY (1) SMOKE ZONE SHALL BE TESTED AT A TIME

Room Number	Room Name	Area (ft2)	Avg. Ceiling Ht. (ft)	Volume (ft3)	Smoke Supply (CFM)	Smoke Exhaus (CFM)
2209	DLB. OCC. CELL	81	10.0	810	370	410
2211	DLB. OCC. CELL	81	10.0	810	370	410
2212	DLB. OCC. CELL	81	10.0	810	370	410
2213	DLB. OCC. CELL	81	10.0	810	370	410
2214	DLB. OCC. CELL	81	10.0	810	370	410
2215	DLB. OCC. CELL	81	10.0	810	370	410
2216	HC DBL. OCC CELL	88	10.0	880	400	440
2221	DLB. OCC. CELL	81	10.0	810	370	410
2222	DLB. OCC. CELL	81	10.0	810	370	410
2223	DLB. OCC. CELL	83	10.0	830	380	420
224	SAFETY VESTIBULE	-	-	-	125	-
2225	DLB. OCC. CELL	81	10.0	810	370	410
2226	DLB. OCC. CELL	81	10.0	810	370	410
2227	DLB. OCC. CELL	81	10.0	810	370	410
2228	DLB. OCC. CELL	81	10.0	810	370	410
2232	DLB. OCC. CELL	81	10.0	810	370	410
2233	DLB. OCC. CELL	81	10.0	810	370	410
2234	DLB. OCC. CELL	81	10.0	810	370	410
2235	DLB. OCC. CELL	81	10.0	810	370	410
3201	DLB. OCC. CELL	81	9.33	756	350	380
3202	DLB. OCC. CELL	81	9.33	756	350	380
3203	DLB. OCC. CELL	81	9.33	756	350	380
3204	DLB. OCC. CELL	81	9.33	756	350	380
3205	DLB. OCC. CELL	81	9.33	756	350	380
3206	DLB. OCC. CELL	81	9.33	756	350	380
3207	DLB. OCC. CELL	88	9.33	821	380	420
3213	DLB. OCC. CELL	81	9.33	756	350	380
3214	DLB. OCC. CELL	81	9.33	756	350	380
3215	DLB. OCC. CELL	83	9.33	774	360	390
3216	SAFETY VESTIBULE	-	-	-	165	-
3217	DLB. OCC. CELL	81	9.33	756	350	380
3218	DLB. OCC. CELL	81	9.33	756	350	380
3219	DLB. OCC. CELL	81	9.33	756	350	380
3221	DLB. OCC. CELL	81	9.33	756	350	380
3224	DLB. OCC. CELL	81	9.33	756	350	380
3225	DLB. OCC. CELL	81	9.33	756	350	380

9.33 9.33

14,310

**Project:** Collin Co ADF Booking Add **Designation:** SSF-02 / SEF-02

**Smoke Testing Candle Count \*:** 14 30 SECOND CANDLE/S IN DAYROOM 4 60 SECOND CANDLE/S IN DAYROOM \* ONLY (1) DORM OR DAYRM. SHALL BE TESTED AT A TIME \* ONLY (1) SMOKE ZONE SHALL BE TESTED AT A TIME

<u>Design Acn.</u>	30					
Room Number	Room Name	Area (ft2)	Avg. Ceiling Ht. (ft)	Volume (ft3)	Smoke Supply (CFM)	Smoke Exhaus (CFM)
2201	DAYROOM/DINING/TV	1125	10	11,250	5070	5630
2201	DAYROOM/DINING/TV	2385	20.67	49,298	22210	24650
2202	HOUSING OFFICER WK. STATION	105	20.67	2,170	990	1090
2205	STAFF RESTROOM	-	-	-	200	-
2206	ELECT. STORAGE RECHARGE	-	-	-	60	-
2207	MULTIFUNCTIONAL KIOSK	110	20.67	2,274	1030	1140
2217	INMATE TOILET	90	10	900	410	450
2218	SHOWER	100	10	1,000	450	500
2219	JANITOR	-	-	-	55	-
2229	INMATE TOILET	35	10	350	170	180
2231	STORAGE	-	-	-	40	-
-	CORRIDOR	1315	10	13,150	5930	6580
3208, 3209	INMATE SHOWER, INMATE TOILET	185	9.33	1,726	790	870
3211	JANITOR	-	-	-	115	-
3222	INMATE TOILET	35	9.33	327	160	170
3223	STORAGE	-	-	-	45	-

SUPPLY (CFM)	37,72
(HAUST (CFM)	41,26

TOTAL VOL. (FT3) 82,445



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PLAN - SMOKE ZONES

MICHAEL JOSEPH SMITH

# DATE DESCRIPTION 1 08.18.2021 ADDENDUM #2

# **SMOKE DETECTION NOTES:**

1. REFER TO MP000 FOR ADDITIONAL HVAC & GENERAL NOTES, ABBREVIATIONS AND

> . ALL SMOKE ZONES AND ASSOCIATED MOTORIZED DAMPERS IN EACH ZONE SHALL OPERATE

INDEPENDENTLY OF EACH OTHER AS DESCRIBED IN SPECIFICATIONS. DAMPER SHALL BE CONNECTED TO 3. SMOKE DETECTORS SHALL BE PROVIDED IN

SEVEN SMOKE EVACUATION ZONES SHOWN UTILIZING THE INTELLIGENT ADDRESSABLE FIRE CONTROL SYSTEM OF THE BUILDING. REFER TO SPECS SECTION 283110.

THE FIRE ALARM CONTRACTOR WILL BE RESPONSIBLE FOR THE COMPLETE SYSTEM DESIGN.

SMOKE DETECTION AND ALARM WILL BE ACCOMPLISHED IN THE

THE DESIGN SUBMITTAL SHALL INCLUDE ONE LINE, PLAN LAYOUT, CUT SHEETS, PERFORMANCE CRITERIA AND APPLICABLE CALCULATIONS.

THE ADDRESSABLE SYSTEM SHALL DETECT SMOKE AND INITIATE THE SMOKE REMOVAL SYSTEM WITHIN 45 SECONDS. EACH SMOKE DETECTION ZONE SHALL INDEPENDENTLY DETECT SMOKE AND ANNUNCIATE ALARM.

5. THE DETECTION SYSTEM SHALL INCORPORATE THE FOLLOWING DETECTION METHODS: A. ENCLOSED CELL/AREA PROTECTION. B. RETURN AIR DUCT PROTECTION FOR THE AHU'S IN THE ZONE.

REFER TO HVAC PLANS. 6. THE SYSTEM SHALL BE PROGRAMMED FOR ZONE. AUTOMATIC RESET

WHEN SMOKE DETECTOR ALARMS CLEAR. 7. THE SYSTEM SHALL BE FULLY INSPECTED AND TESTED FOR COMPLIANCE WITH THE TEXAS COMMISSION ON JAIL STANDARDS (TCJS). THE CONTRACTOR SHALL MAKE ANY NEEDED FIELD CHANGES OR IMPROVEMENTS TO SATISFACTORILY PASS TCJS INSPECTION AND TESTS. IF WHILE PRE-TESTING AND THE SYSTEM DOES NOT PASS TCJS REQUIEREMENTS, ANY ADDITIONAL PRODUCTS / ALARMS / HEADS ADDED TO PASS TESTING SHALL BE PRE-APPROVED BY THE EOR AND THE COST FOR THE ADDITIONAL WORK SHALL NOT BE PASSED ONTO THE OWNER AND SHALL BE ABSORBED BY THE CONTRACTOR.

**Project:** Collin Co ADF Booking Add **Designation:** SSF-03A, SSF-03B, & SSF-03C / SEF-03 Serves: Zone 3 **System AHU:** AHU-I-6 Design ACH: 30

**Smoke Testing Candle Count \*:** 14 30 SECOND CANDLE/S IN DAYROOM 60 SECOND CANDLE/S IN DAYROOM 1 30 SECOND CANDLE/S PER DORM/CELL \* ONLY (1) DORM OR DAYRM. SHALL BE TESTED AT A TIME \* ONLY (1) SMOKE ZONE SHALL BE TESTED AT A TIME

Room Number	Room Name	Area (ft2)	Avg. Ceiling Ht. (ft)	Volume (ft3)	Smoke Supply (CFM)	Smoke Exhaust (CFM)
2101	DAYROOM/DINING/TV	2341	20.67	48,388	25225	24200
2101	DAYROOM/DINING/TV	1100	10	11,000	4950	5500
2102	HOUSING OFFICER WK.STATION	129	20.67	2,666	1210	1340
2105	STAFF RESTROOM	-	-	-	155	-
2106	ELECT. STO / RECHARGE	-	-	-	60	-
2107	MULTIFUNCTIONAL KIOSK	106	20.67	2,191	990	1100
2110	STORAGE	-	-	-	90	-
2111	DORMITORY	157	10	1,570	220	790
2112	STORAGE	-	-	-	135	-
2113	DORMITORY	161	10	1,610	230	810
2114	SHOWER	91	10	910	420	460
2115	INMATE RESTROOM	94	10	940	210	470
2116	INMATE RESTROOM	87	10	870	100	440
2117	HC DORMITORY	152	10	1,520	215	760
2118	DORMITORY	163	10	1,630	235	820
2119	DORMITORY	161	10	1,610	235	810
2121	DORMITORY	161	10	1,610	235	810
2122	DORMITORY	161	10	1,610	235	810
2123	DORMITORY	161	10	1,610	235	810
2124	JANITOR	-	-	-	50	-
2125	DORMITORY	161	10	1,610	235	810
-	CORRIDOR	1101	10	11,010	4960	5510
3101	STORAGE	-	-	-	90	-
3102	DORMITORY	157	9.33	1,465	670	740
3103	STORAGE	-	-	-	120	-
3104	DORMITORY	161	9.33	1,502	690	760
3105	SHOWER	91	9.33	849	390	430
3106	INMATE RESTROOM	94	9.33	877	400	440
3107	INMATE RESTROOM	87	9.33	812	370	410
3108	DORMITORY	152	9.33	1,418	640	710
3109	DORMITORY	160	9.33	1,493	925	750
3111	DORMITORY	158	9.33	1,474	915	740
3112	DORMITORY	158	9.33	1,474	915	740
3113	DORMITORY	158	9.33	1,474	915	740
3114	DORMITORY	158	9.33	1,474	915	740
3115	JANITOR	-	-	-	50	-
3116	DORMITORY	158	9.33	1,474	915	740

**Project:** Collin Co ADF Booking Add **Smoke Testing Candle Count \*: Designation:** SSF-04 / SEF-04 Serves: Zone 4

54,190

SUPPLY (CFM)

EXHAUST (CFM)

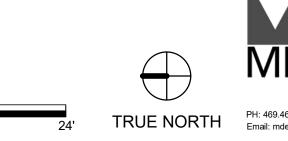
14 30 SECOND CANDLE/S IN DAYROOM 60 SECOND CANDLE/S IN DAYROOM 30 SECOND CANDLE/S PER DORM/CELL \* ONLY (1) DORM OR DAYRM. SHALL BE TESTED AT A TIME \* ONLY (1) SMOKE ZONE SHALL BE TESTED AT A TIME

System AHU: AHU-I-9 Design ACH: 30

TOTAL VOL. (FT3) 108,142

Room Number	Room Name	Area (ft2)	Avg. Ceiling Ht. (ft)	Volume (ft3)	Smoke Supply (CFM)	Smoke Exhaust (CFM)
2301	DAYROOM/DINING/TV	1781	20.67	36813	19555	18410
2301	DAYROOM/DINING/TV	678	10	6780	3060	3390
2302	HOUSING OFFICER WK.STATION	129	20.67	2666	1210	1340
2305	STAFF RESTROOM	-	-	-	40	-
2306	ELECT. STO. / RECHARGE	-	-	-	60	-
2307	MULTIFUNCTIONAL KIOSK	106	20.67	2191	990	1100
2309	STORAGE	-	-	-	70	-
2311	DORMITORY	168	10	1680	235	840
2312	DORMITORY	231	10	2310	460	1160
2313	DORMITORY	161	10	1610	230	810
2314	INMATE TOILET	87	10	870	170	440
2315	INMATE SHOWER	84	10	840	180	420
2316	HC DORMITORY	162	10	1620	230	810
2317	DORMITORY	161	10	1610	230	810
2318	JANITOR	-	-	-	90	-
2319	STORAGE	-	-	-	125	-
-	CORRIDOR	682	10	6820	3070	3410
3301	DORMITORY	230	10	2300	1040	1150
3302	DORMITORY	161	10	1610	730	810
3303	INMATE TOILET	87	10	870	400	440
3304	INMATE SHOWER	84	10	840	380	420
3305	DORMITORY	163	10	1630	740	820
3306	DORMITORY	161	10	1610	730	810
3307	JANITOR	-	-	-	50	-
3308	STORAGE	-	_	-	125	-

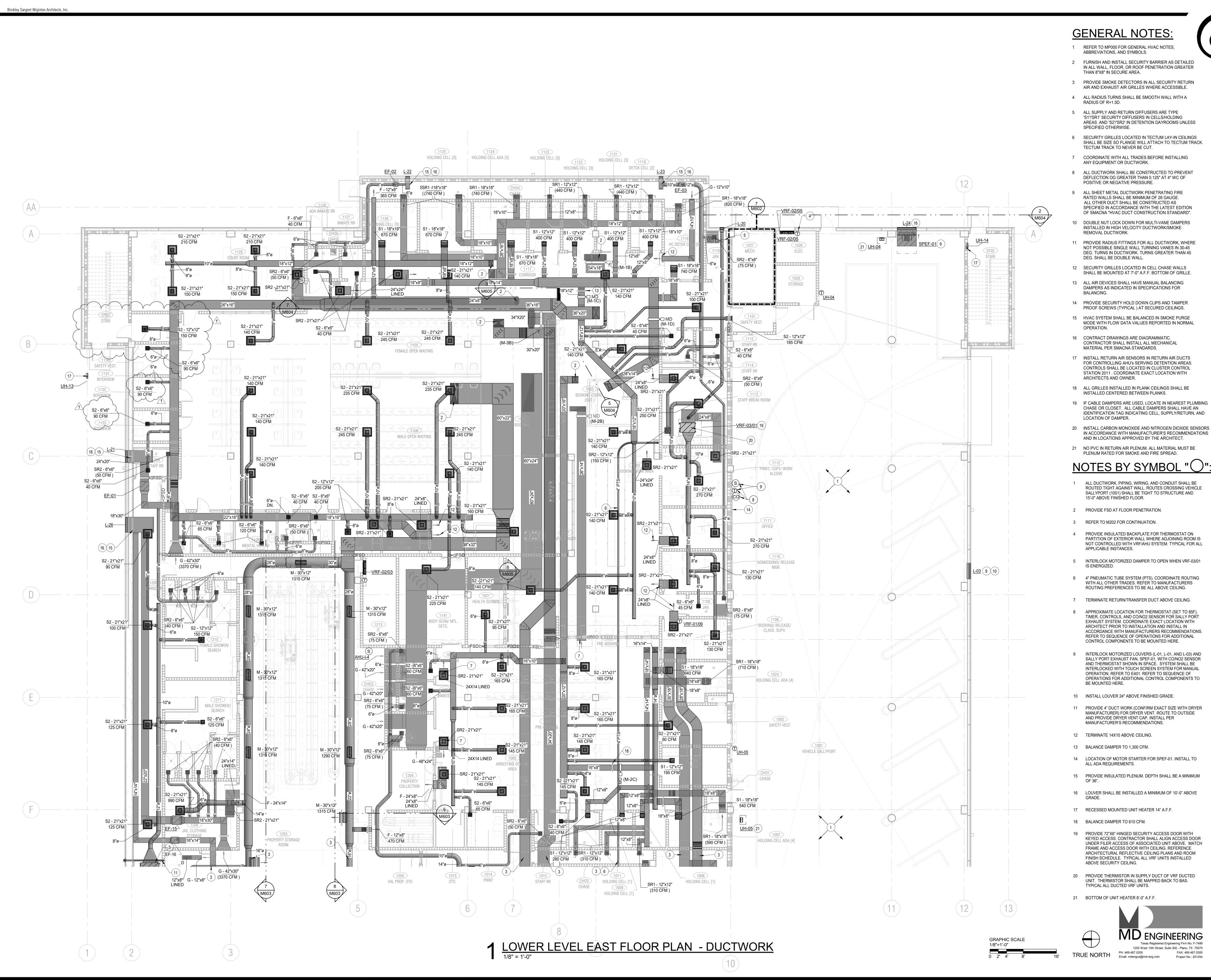




TOTAL VOL. | 74,671

(FT3)

1 08.18.2021 ADDENDUM #2



## **GENERAL NOTES:**

- 1 REFER TO MP000 FOR GENERAL HVAC NOTES,
- 2 FURNISH AND INSTALL SECURITY BARRIER AS DETAILED IN ALL WALL, FLOOR, OR ROOF PENETRATION GREATER
- THAN 8"X8" IN SECURE AREA.
- PROVIDE SMOKE DETECTORS IN ALL SECURITY RETURN AIR AND EXHAUST AIR GRILLES WHERE ACCESSIBLE.

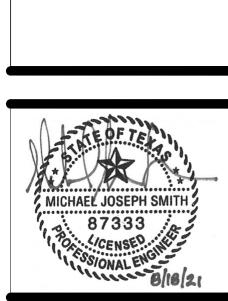
WIGINTO

- 4 ALL RADIUS TURNS SHALL BE SMOOTH WALL WITH A
- 5 ALL SUPPLY AND RETURN DIFFUSERS ARE TYPE 'S1'/'SR1' SECURITY DIFFUSERS IN CELLS/HOLDING AREAS. AND 'S2'/'SR2' IN DETENTION DAYROOMS UNLESS SPECIFIED OTHERWISE.
- 6 SECURITY GRILLES LOCATED IN TECTUM LAY-IN CEILINGS SHALL BE SIZE SO FLANGE WILL ATTACH TO TECTUM TRACK. TECTUM TRACK TO NEVER BE CUT.
- 7 COORDINATE WITH ALL TRADES BEFORE INSTALLING ANY EQUIPMENT OR DUCTWORK.
- 8 ALL DUCTWORK SHALL BE CONSTRUCTED TO PREVENT DEFLECTION OG GREATER THAN 0.125" AT 4" WC OF
- POSITIVE OR NEGATIVE PRESSURE.
- 9 ALL SHEET METAL DUCTWORK PENETRATING FIRE RATED WALLS SHALL BE MINIMUM OF 26 GAUGE. ALL OTHER DUCT SHALL BE CONSTRUCTED AS SPECIFIED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARD".
- 10 DOUBLE NUT LOCK DOWN FOR MULTI-VANE DAMPERS INSTALLED IN HIGH VELOCITY DUCTWORK/SMOKE REMOVAL DUCTWORK.
- PROVIDE RADIUS FITTINGS FOR ALL DUCTWORK, WHERE NOT POSSIBLE SINGLE WALL TURNING VANES IN 30-45 DEG. TURNS IN DUCTWORK. TURNS GREATER THAN 45 DEG. SHALL BE DOUBLE WALL.
- 12 SECURITY GRILLES LOCATED IN CELL CHASE WALLS SHALL BE MOUNTED AT 7'-0" A.F.F. BOTTOM OF GRILLE.
- 13 ALL AIR DEVICES SHALL HAVE MANUAL BALANCING DAMPERS AS INDICATED IN SPECIFICATIONS FOR
- 14 PROVIDE SECURITY HOLD DOWN CLIPS AND TAMPER PROOF SCREWS (TYPICAL ) AT SECURED CEILINGS.
- 15 HVAC SYSTEM SHALL BE BALANCED IN SMOKE PURGE
- MODE WITH FLOW DATA VALUES REPORTED IN NORMAL
- 16 CONTRACT DRAWINGS ARE DIAGRAMMATIC.
- 17 INSTALL RETURN AIR SENSORS IN RETURN AIR DUCTS FOR CONTROLLING AHU'S SERVING DETENTION AREAS. CONTROLS SHALL BE LOCATED IN CLUSTER CONTROL STATION 2011 . COORDINATE EXACT LOCATION WITH
- 18 ALL GRILLES INSTALLED IN PLANK CEILINGS SHALL BE INSTALLED CENTERED BETWEEN PLANKS.
- 19 IF CABLE DAMPERS ARE USED, LOCATE IN NEAREST PLUMBING CHASE OR CLOSET. ALL CABLE DAMPERS SHALL HAVE AN IDENTIFICATION TAG INDICATING CELL, SUPPLY/RETURN, AND LOCATION OF DAMPER.
- IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN LOCATIONS APPROVED BY THE ARCHITECT.
- 21 NO PVC IN RETURN AIR PLENUM. ALL MATERIAL MUST BE PLENUM RATED FOR SMOKE AND FIRE SPREAD.

# NOTES BY SYMBOL "(

- ALL DUCTWORK, PIPING, WIRING, AND CONDUIT SHALL BE ROUTED TIGHT AGAINST WALL. ROUTES CROSSING VEHICLE SALLYPORT (1001) SHALL BE TIGHT TO STRUCTURE AND
- 2 PROVIDE FSD AT FLOOR PENETRATION.
- 3 REFER TO M202 FOR CONTINUATION.
- 4 PROVIDE INSULATED BACKPLATE FOR THERMOSTAT ON PARTITION OF EXTERIOR WALL WHERE ADJOINING ROOM IS NOT CONTROLLED WITH VRF/AHU SYSTEM. TYPICAL FOR ALL APPLICABLE INSTANCES.
- 5 INTERLOCK MOTORIZED DAMPER TO OPEN WHEN VRF-03/01 IS ENERGIZED.
- 6 4" PNEUMATIC TUBE SYSTEM (PTS), COORDINATE ROUTING WITH ALL OTHER TRADES. REFER TO MANUFACTURERS ROUTING PREFERENCES TO BE ALL ABOVE CEILING.
- 7 TERMINATE RETURN/TRANSFER DUCT ABOVE CEILING.
- APPROXIMATE LOCATION FOR THERMOSTAT (SET TO 85F), TIMER, CONTROLS, AND CO/NO2 SENSOR FOR SALLY PORT EXHAUST SYSTEM. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION AND INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. REFER TO SEQUENCE OF OPERATIONS FOR ADDITIONAL CONTROL COMPONENTS TO BE MOUNTED HERE.
- INTERLOCK MOTORIZED LOUVERS (L-01, L-01, AND L-03) AND SALLY PORT EXHAUST FAN, SPEF-01, WITH CO/NO2 SENSOR AND THERMOSTAT SHOWN IN SPACE. SYSTEM SHALL BE INTERLOCKED WITH TOUCH SCREEN SYSTEM FOR MANUAL OPERATION, REFER TO E401. REFER TO SEQUENCE OF OPERATIONS FOR ADDITIONAL CONTROL COMPONENTS TO
- 10 INSTALL LOUVER 24" ABOVE FINISHED GRADE.
- 11 PROVIDE 4" DUCT WORK (CONFIRM EXACT SIZE WITH DRYER MANUFACTURER) FOR DRYER VENT. ROUTE TO OUTSIDE AND PROVIDE DRYER VENT CAP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- 12 TERMINATE 14X10 ABOVE CEILING.
- 13 BALANCE DAMPER TO 1,300 CFM.
- 14 LOCATION OF MOTOR STARTER FOR SPEF-01. INSTALL TO ALL ADA REQUIREMENTS.
- 15 PROVIDE INSULATED PLENUM. DEPTH SHALL BE A MINIMUM
- 16 LOUVER SHALL BE INSTALLED A MINIMUM OF 10'-0" ABOVE
- 17 RECESSED MOUNTED UNIT HEATER 14" A.F.F.
- 18 BALANCE DAMPER TO 610 CFM.
- 19 PROVIDE 72"X6" HINGED SECURITY ACCESS DOOR WITH KEYED ACCESS, CONTRACTOR SHALL ALIGN ACCESS DOOR UNDER FILER ACCESS OF ASSOCIATED UNIT ABOVE. MATCH FRAME AND ACCESS DOOR WITH CEILING. REFERENCE ARCHITECTURAL REFLECTIVE CEILING PLANS AND ROOM FINISH SCHEDULE. TYPICAL ALL VRF UNITS INSTALLED
- 20 PROVIDE THERMISTOR IN SUPPLY DUCT OF VRF DUCTED UNIT. THERMISTOR SHALL BE MAPPED BACK TO BAS. TYPICAL ALL DUCTED VRF UNITS.
- 21 BOTTOM OF UNIT HEATER 8'-0" A.F.F.



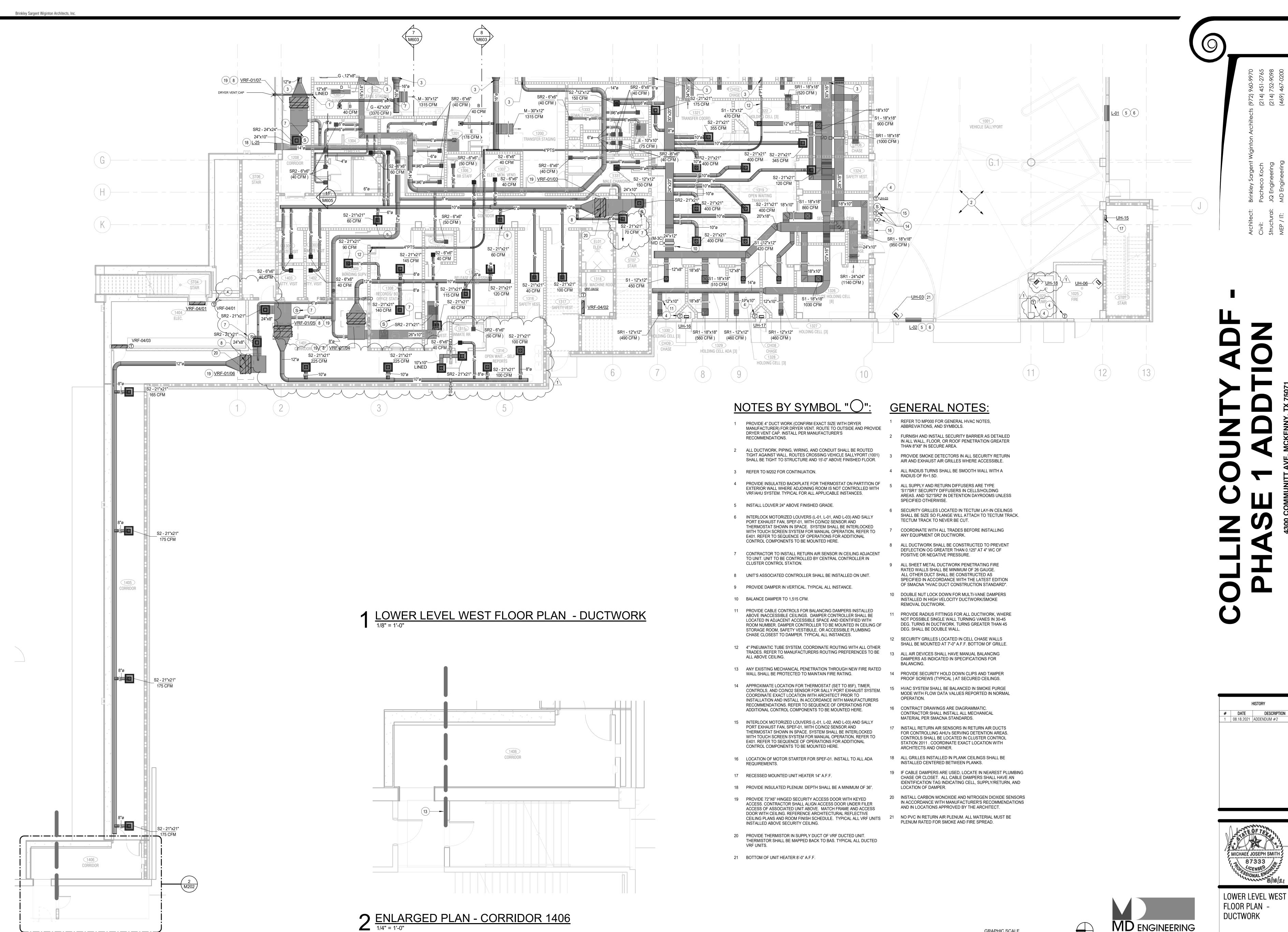


HISTORY

# DATE DESCRIPTION

1 | 08.18.2021 | ADDENDUM #2

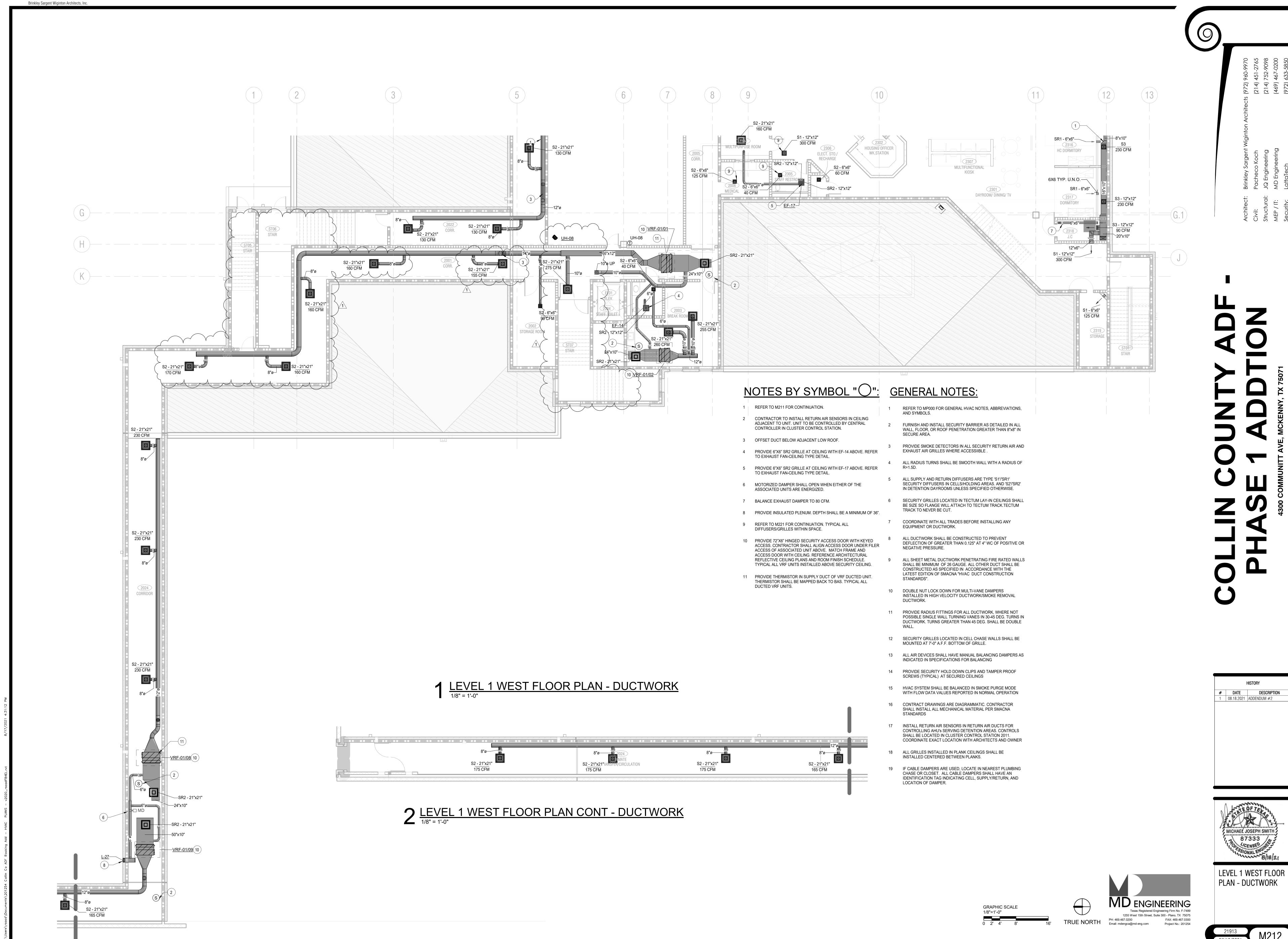
LOWER LEVEL EAST FLOOR PLAN -DUCTWORK

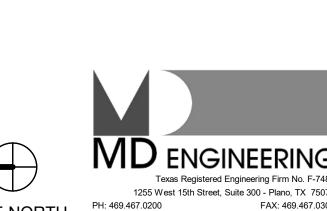


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**GRAPHIC SCALE** 1/8"=1'-0"

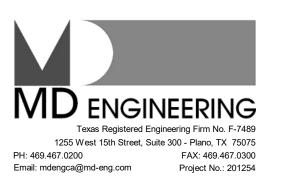
HISTORY







GRAPHIC SCALE



MICHAEL JOSEPH SMITH

TIER LEVEL EAST DUCTWORK

DESCRIPTION

1 | 08.18.2021 | ADDENDUM #2

SARGENT WIGINTON

NOTES BY SYMBOL

1 ALL DUCTWORK, PIPING, WIRING AND CONDUIT SHALL BE 7'-0" ABOVE MEZZANINE FLOOR LEVEL. 2 PROVIDE CABLE CONTROLS FOR BALANCING DAMPERS INSTALLED

ABOVE INACCESSIBLE CEILINGS. DAMPER CONTROLLER SHALL BE LOCATED IN ADJACENT ACCESSIBLE SPACE AND IDENTIFIED WITH ROOM NUMBER. DAMPER CONTROLLER TO BE MOUNTED IN CEILING OF STORAGE ROOM, SAFETY VESTIBULE, OR ACCESSIBLE PLUMBING CHASE CLOSEST TO DAMPER. TYPICAL ALL INSTANCES.

3 ROUTE MAIN DUCTWORK BETWEEN STRUCTURAL JOISTS. TAPS SHALL BE CONNECTED TO MAIN BELOW STRUCTURAL JOISTS.

4 DUCTWORK SHALL BE COORDINATED WITH SKYLIGHT.

5 REFER TO M222 FOR CONTINUATION.

6 PROVIDE 48"X72" WOVEN SECURITY MESH WITH A MINIMUM OF 75%

OPEN AREA WITH 12" PLENUM. 7 PROVIDE 72"X72" WOVEN SECURITY MESH WITH A MINIMUM OF 75%

OPEN AREA WITH 12" PLENUM.

8 UNIT SHALL BE CAPABLE OF DISASSEMBLING TO FIT THROUGH LIFT OUT ACCESS PANEL THROUGH FLOOR.

9 EMS CONTROL CABINETS.

AND SYMBOLS.

SECURE AREA.

TRACK TO NEVER BE CUT.

EQUIPMENT OR DUCTWORK.

NEGATIVE PRESSURE.

STANDARDS".

DUCTWORK.

FURNISH AND INSTALL SECURITY BARRIER AS DETAILED IN ALL WALL, FLOOR, OR ROOF PENETRATION GREATER THAN 8"x8" IN

PROVIDE SMOKE DETECTORS IN ALL SECURITY RETURN AIR AND

ALL RADIUS TURNS SHALL BE SMOOTH WALL WITH A RADIUS OF

SECURITY DIFFUSERS IN CELLS/HOLDING AREAS. AND 'S2'/'SR2'

SECURITY GRILLES LOCATED IN TECTUM LAY-IN CEILINGS SHALL BE SIZE SO FLANGE WILL ATTACH TO TECTUM TRACK.TECTUM

DEFLECTION OF GREATER THAN 0.125" AT 4" WC OF POSITIVE OR

ALL SHEET METAL DUCTWORK PENETRATING FIRE RATED WALLS SHALL BE MINIMUM OF 26 GAUGE. ALL OTHER DUCT SHALL BE CONSTRUCTED AS SPECIFIED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION

INSTALLED IN HIGH VELOCITY DUCTWORK/SMOKE REMOVAL

POSSIBLE SINGLE WALL TURNING VANES IN 30-45 DEG. TURNS IN

DUCTWORK. TURNS GREATER THAN 45 DEG. SHALL BE DOUBLE

WITH FLOW DATA VALUES REPORTED IN NORMAL OPERATION

CONTROLLING AHU'S SERVING DETENTION AREAS. CONTROLS

COORDINATE EXACT LOCATION WITH ARCHITECTS AND OWNER

SHALL BE LOCATED IN CLUSTER CONTROL STATION 2011.

CHASE OR CLOSET. ALL CABLE DAMPERS SHALL HAVE AN

IDENTIFICATION TAG INDICATING CELL, SUPPLY/RETURN, AND

SHALL INSTALL ALL MECHANICAL MATERIAL PER SMACNA

MOUNTED AT 7'-0" A.F.F. BOTTOM OF GRILLE.

SCREWS (TYPICAL) AT SECURED CEILINGS

INSTALLED CENTERED BETWEEN PLANKS.

LOCATION OF DAMPER.

INDICATED IN SPECIFICATIONS FOR BALANCING

IN DETENTION DAYROOMS UNLESS SPECIFIED OTHERWISE.

COORDINATE WITH ALL TRADES BEFORE INSTALLING ANY

ALL DUCTWORK SHALL BE CONSTRUCTED TO PREVENT

ALL SUPPLY AND RETURN DIFFUSERS ARE TYPE 'S1'/'SR1'

EXHAUST AIR GRILLES WHERE ACCESSIIBLE.

10 DUCT SHALL BE REDUCED TO FIT BELOW LOW STRUCTURAL BEAM. 11 SERVICE PATH SHALL BE WIDE ENOUGH TO ALLOW FOR ADJACENT UNITS TO BE SERVICED. PATH WIDTH SHALL BE AT MINIMUM THE

WIDEST COMPONENT IN ADJACENT EQUIPMENT.

12 BALANCE EXHAUST DAMPER TO 120 CFM.

13 BALANCE EXHAUST DAMPER TO 240 CFM.

14 PROVIDE DAMPER IN 6X6 DOWN TO FLOOR BELOW. BALANCE EXHAUST DAMPER TO 120 CFM.

15 BALANCE EXHAUST DAMPER TO 160 CFM.

16 26X16 EXHAUST TP TO ROOF.

17 OUTSIDE AIR UP. REFER TO 01 / M601 FOR CONTINUATION.

18 PROVIDE INSULATED PLENUM. DEPTH SHALL BE A MINIMUM OF 36".

19 PROVIDE INSULATED PLENUM COMMUNICATING L-4 & L-5. DEPTH SHALL BE A MINIMUM OF 36".

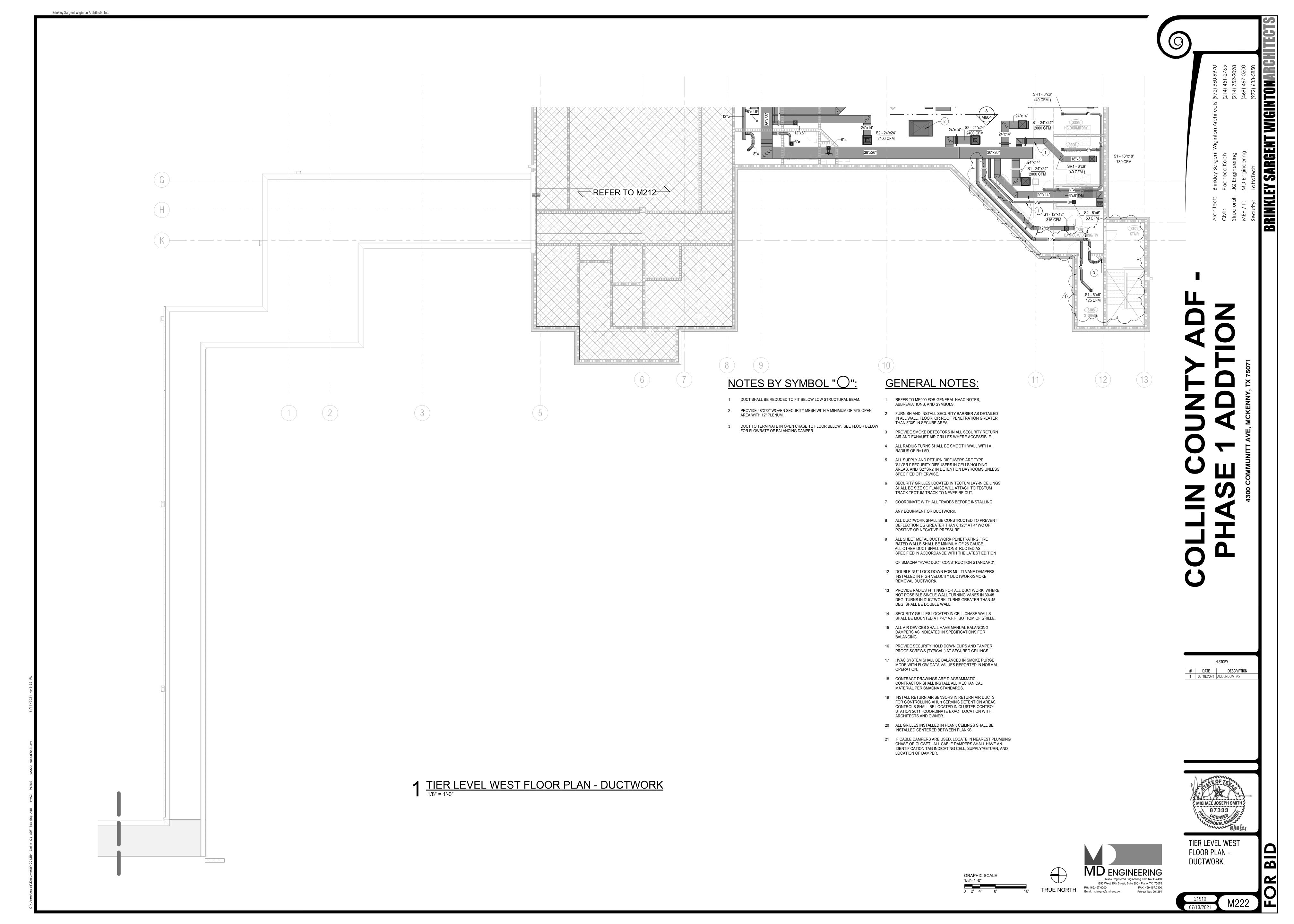
20 PROVIDE INSULATED PANEL ON BACK SIDE OF INACTIVE SECTION.

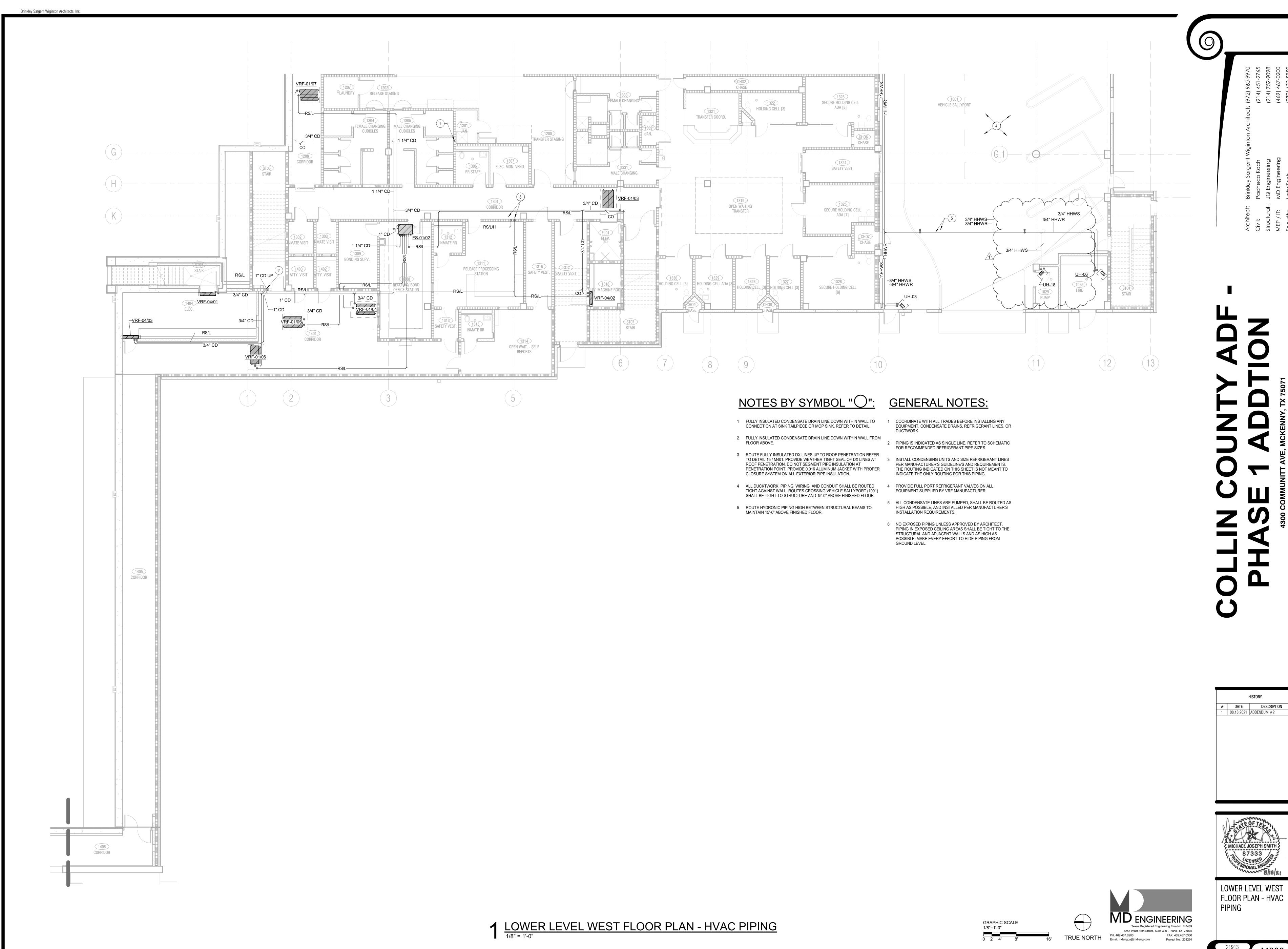
LOUVER SHALL BE REMOVABLE AND USED FOR ACCESS PATH FOR EQUIPMENT MAINTENANCE.

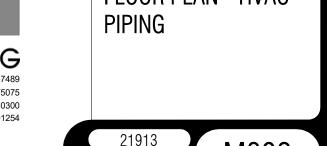
21 DUCT TO TERMINATE IN OPEN CHASE TO FLOOR BELOW. SEE FLOOR

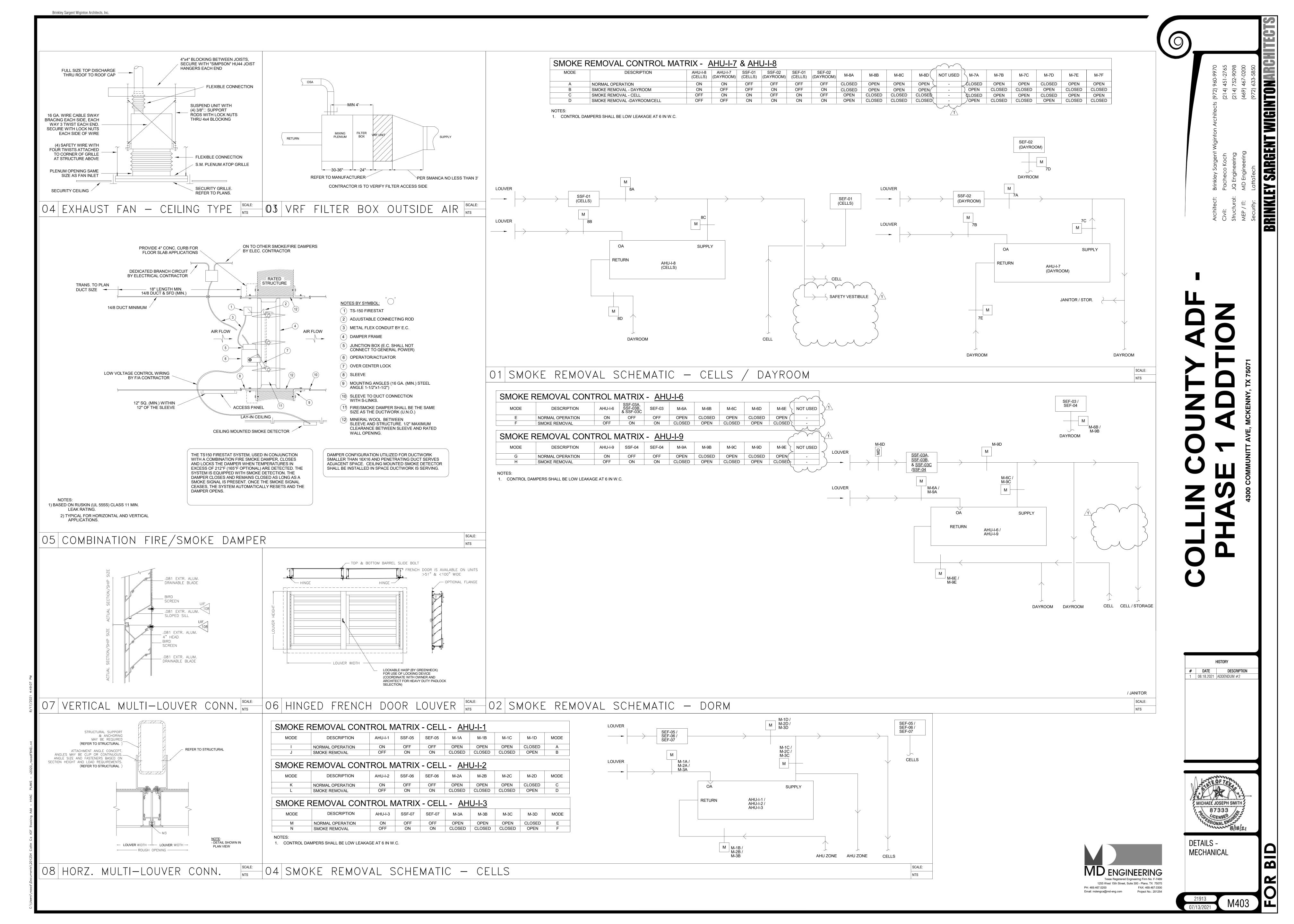
BELOW FOR FLOWRATE OF BALANCING DAMPER.

FLOOR PLAN -







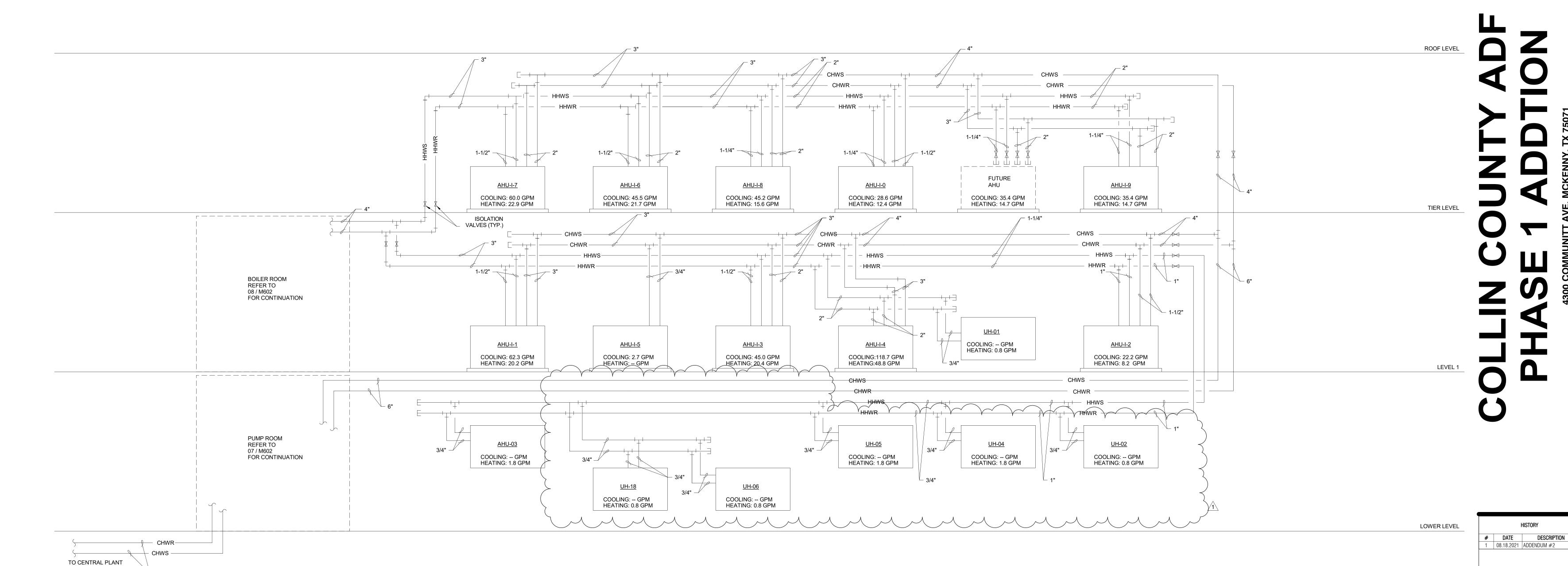


FLOW DIAGRAMS -MECHANICAL

HISTORY

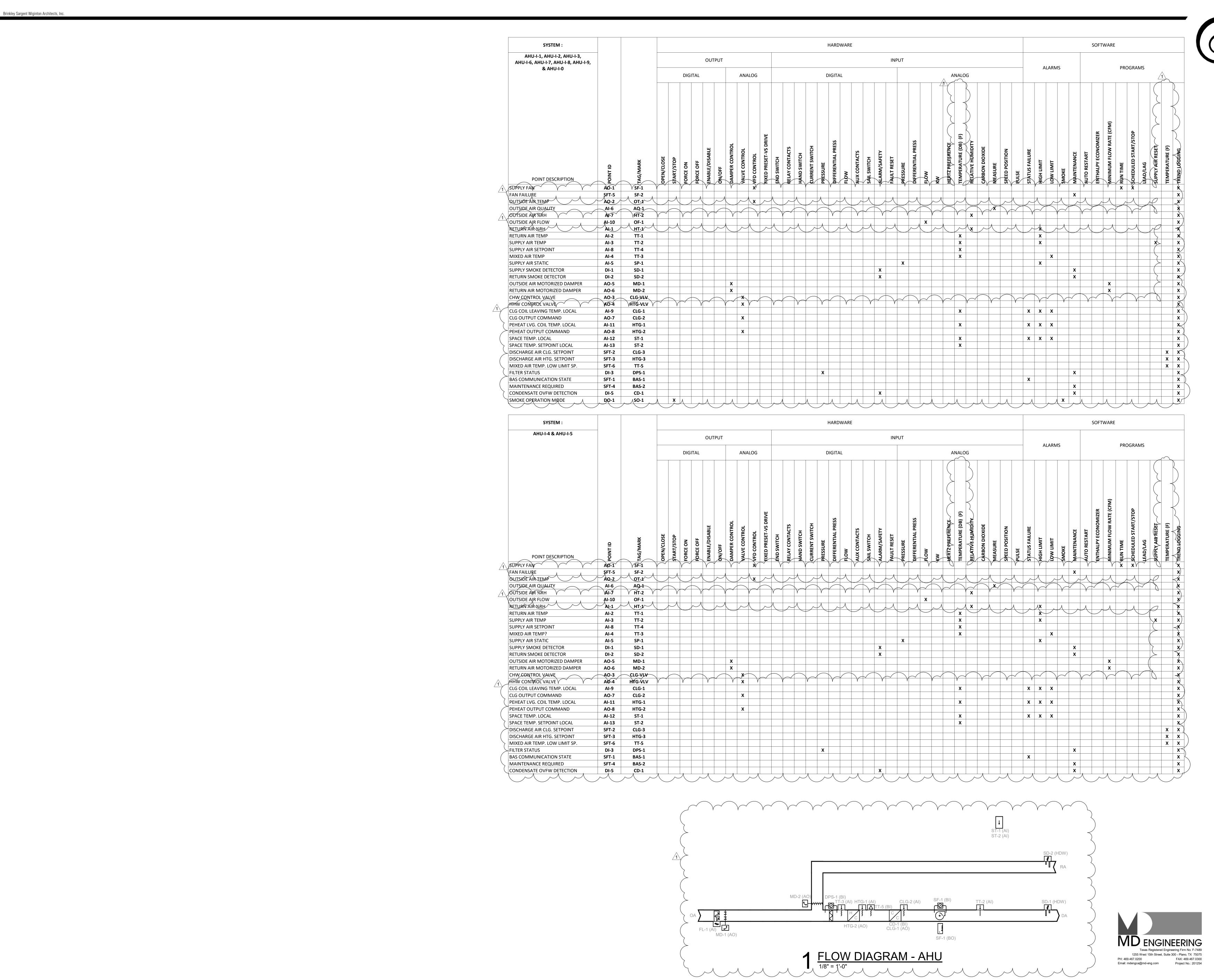
# **GENERAL NOTES**

- 1. ALL AIR HANDLING UNITS SHALL HAVE 3 WAY VALVES.
- 2. REFER TO DETAILS 05 / M402 & 06 / M402 FOR ADDITIONAL FITTINGS AND VALVES REQUIRED AT COILS.



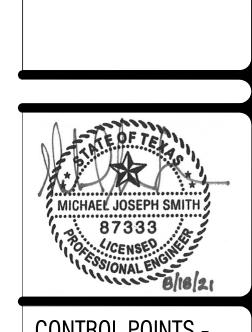
1 MECHANICAL PIPING FLOW DIAGRAM NOT TO SCALE

Texas Registered Engineering Firm No. F-7489 1255 West 15th Street, Suite 300 - Plano, TX 75075 69.467.0200 FAX: 469.467.0300 PH: 469.467.0200 Email: mdengca@md-eng.com Project No.: 201254

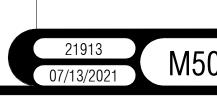


COLLIN COUNTY ADF PHASE 1 ADDTION

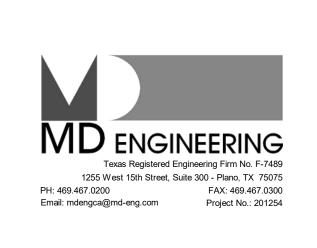
# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2

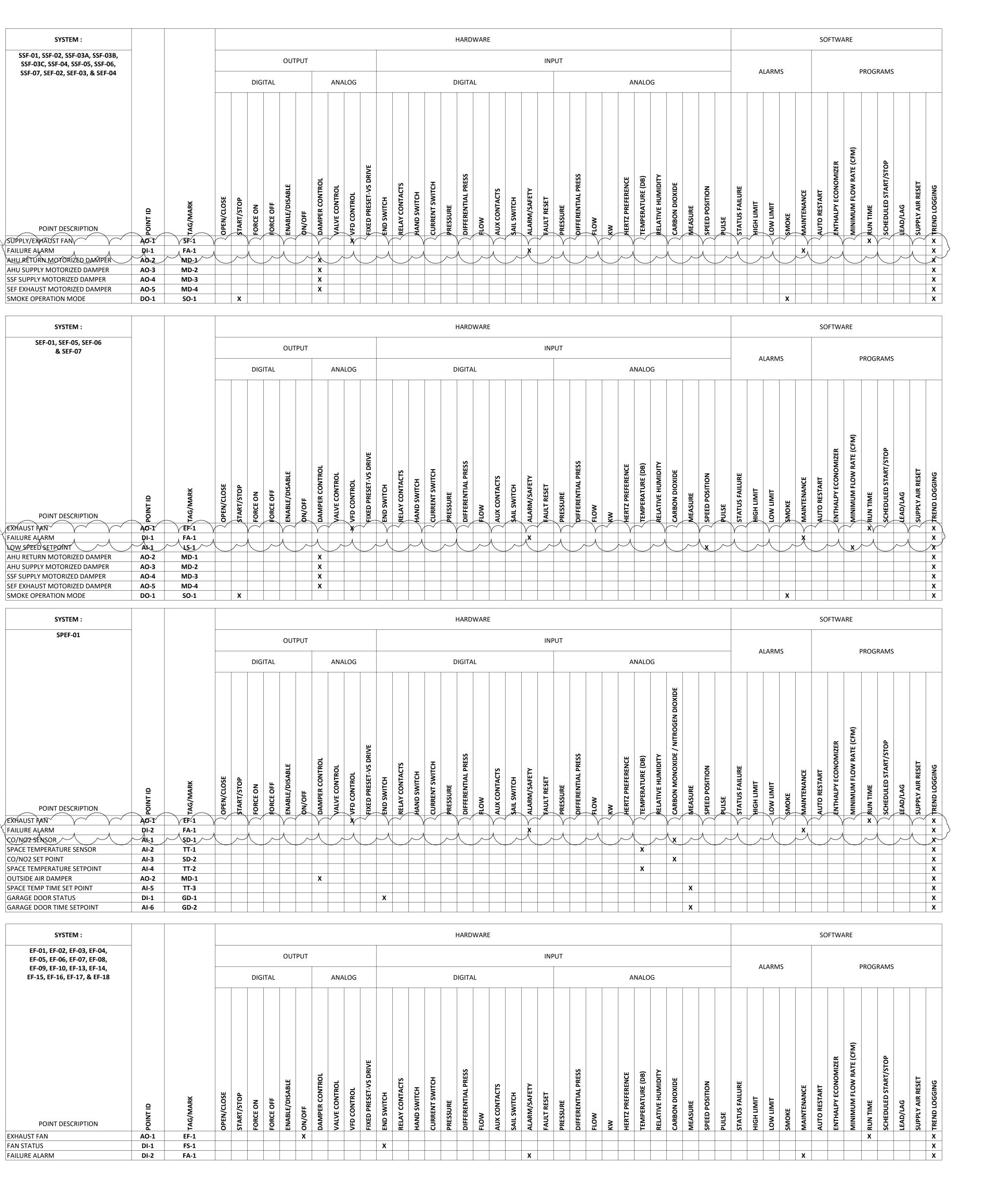


CONTROL POINTS -MECHANICAL



Brinkley Sargent Wiginton Architects, Inc.







MICHAEL JOSEPH SMITH CONTROL POINTS -MECHANICAL

HISTORY

# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2

HARDWARE

SYSTEM:

POINT DESCRIPTION

ON/OFF OPERATION MODE

ERROR MESSAGE

ZONE TEMPERATURE

BAS COMMUNICATION STATE FILTER SIGN

PERMIT/PROHIBIT SELECTION

DI-1
AI-1
AI-2
AI-3
DO-1

AI-5

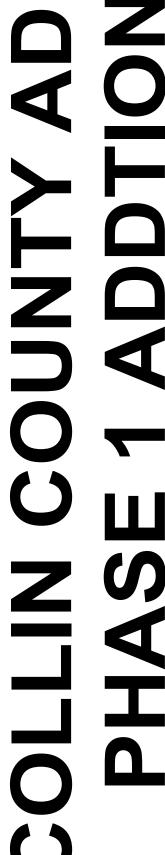
DI-4

PP-1

,			,	1																											1	1				1
ITILATION MODE	AI-6	VM-1																								Х										
ITILATION ON/OFF	DI-5	VM-2																Х																		
PPLY DUCT THERMISTOR	AI-7	TT-3																					Х													
SYSTEM :														HAR	RDWAR	E																)FTWAR	 RE			
FS-01/01, FS-01/02,							JTPUT											IN	PUT																	
& FS-01/03																												А	LARMS				PRC	)GRAMS	5	
					DIGITA	١L		А	NALOG					DIGI	ΓAL							AN	IALOG													
							$\top$																													
																																	RATE (CFM)			
										Æ																						ZER	E (C	ART/STOP		
								_		DRIVE				S						SS		出	@ }	_								ECONOMIZER	RAT			İ.
						SABLE		TROL	<b></b>			RELAY CONTACTS HAND SWITCH	CURRENT SWITCH	PRESSURE DIFFERENTIAL PRESS		မှ		_		PRESS		HERTZ PREFERENCE	TEMPERATURE (DB)	CARBON DIOXIDE			핊			ш	,	NO	FLOW	IAR		SET
		<b>~</b>	SE	٩		. ∣S		CON	VALVE CONTROL VFD CONTROL	FIXED PRESET-VS	ᆼ	RELAY CONTAC	N N	Į.		AUX CONTACTS	둉	ALARM/SAFETY FAULT RESET		IAL		FER	F   F				FAILURE	_		SMOKE MAINTENANCE	AUTO RESTART	EC	표	D SI		R
	<b>□</b>	IARK	OPEN/CLOSE	START/STOP	FORCE ON	FORCE OF F	ا بيا	ָּבְּיִר <u>יַּבְּי</u>	3   5	)RE	END SWITCH	Š   Š	Ę	PRESSURE		K	SAIL SWIT	A/SAF	PRESSURE	DIFFERENT		PRE	<b>W</b>	Ž	MEASURE		S	нідн гіміт	гом гіміт	Ž	.   SES	ENTHALPY	MINIMUM RUN TIME	SCHEDULE	LEAD/LAG	A
	POINT ID		Ž	RT/	Se s	دّد BL	ON/OFF	DAMPER	4   S	ED I	S	≱   Š	3RE	SSU	≥	S S	L SV	KB	SSL	FER	<b>&gt;</b>	XTZ	APE.	CARBON	ASL	VALUE	STATUS	I I	<b>□</b>	SMOKE	ှု ြ ဥ	Ι¥			7/0	SUPPLY AIR RESET
POINT DESCRIPTION	PO	TAG/	OPI	STA	5 5	<u> </u>	NO	DAI :	₹   ¥	E		REL HAI	3	PRE	FLOW	AU)	SAI	ALARIN	PRE	듬	FLOW	里		4   B	ME	A   A	STA		[O	SM AM	.   A.	E		SC   SC	LEA	SU
OR CODE	Al-1	ER-1																								Х				Х						
OR STATUS	DI-1	ER-2																х									Х				$\rightarrow$					

SYSTEM:														HARE	WARE	<u> </u>																SO!	FTWAR	<b>ξ</b> E				
CU-01, CU-02, CU-03, & CU-04						OU <sup>-</sup>	ГРИТ											INP	UT											. 46					00004			
				[	DIGITAL	-			ANALOG	ì				DIGITA	٩L							AN	IALOG						ALARI	MS				PI	ROGRA	.MS		
POINT DESCRIPTION	POINT ID	TAG/MARK	OPEN/CLOSE	START/STOP	FORCE ON	ENABLE/DISABLE	ON/OFF	DAMPER CONTROL	VALVE CONTROL VFD CONTROL	FIXED PRESET-VS DRIVE	RELAY CONTACTS	HAND SWITCH	CORRENI SWITCH	PRESSORE DIFFERENTIAL PRESS	FLOW	AUX CONTACTS	SAIL SWITCH		PRESSURE	DIFFERENTIAL PRESS	KW	HERTZ PREFERENCE	TEMPERATURE (DB)	RELATIVE HUMIDITY  CARBON DIOXIDE	MEASURE	VALUE	MODE	HIGH LIMIT	LOW LIMIT	SMOKE	MAINTENANCE	AUTO RESTART			RUN TIME	SCHEDULED START/STOP	LEAD/LAG SUPPLY AIR RESET	
OFF	DI-1	SF-1																X														-			X	X		2
ATION MODE	Al-1	OM-1																									X				<del></del>							
OR CODE OR STATUS	AI-2 DI-2	ER-1 ER-2															X									Х	Х	,			X	-						



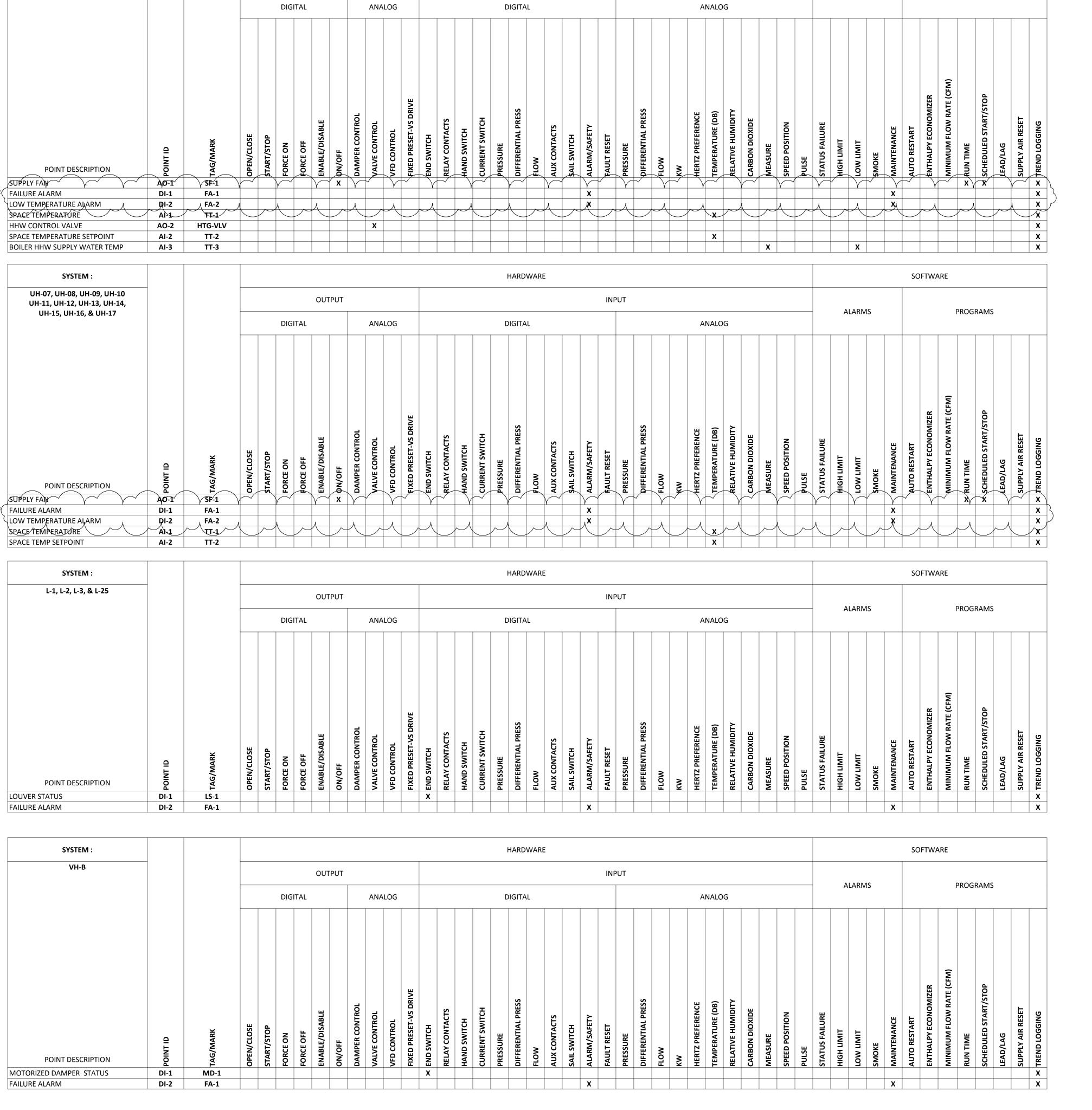


SOFTWARE

# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2

CONTROL POINTS -MECHANICAL





HARDWARE

INPUT

OUTPUT

SYSTEM:

UH-01, UH-02, UH-03, UH-04, UH-05, & UH-06



SOFTWARE

**PROGRAMS** 

**ALARMS** 

MICHAEL JOSEPH SMITH CONTROL POINTS -MECHANICAL

# DATE DESCRIPTION
1 08.18.2021 ADDENDUM #2

SYSTEM:

B-03 & B-04

POINT DESCRIPTION

AI-1

Al-2 Al-3 Dl-1 DO-1 Dl-2 Al-4

AI-5 AI-6

TS-1

TT-5

PM-1 LL-1

LL-2 SP-1

SP-2

LL-3

PS-1

AO-1 DI-1

AO-2 Al-1

AI-2

AI-4

AI-3

AO-1 HTG-VLV-1

AI-8 TS-2

AO-2 HTG-VLV-2

SUPPLY WATER TEMP

RETURN WATER TEMP
OUTSIDE AIR TEMP
BOILER ALARM

BOILER ENABLE COMMAND

BOILER LOW WATER CUT-OFF CARBON DIOXIDE SENSOR

THIRD STAGE TIME SETPOINT

THIRD STAGE CONTROL VALVE

SYSTEM:

CHWP-1, CHWP-2, HHWP-1, & HHWP-2

POINT DESCRIPTION

PUMP MOTOR

LEAD/LAG STATUS LEAD/LAG SCHEDULE

PRESSURE SENSOR

SYSTEM PRESSURE SETPOINT

LEAD/LAG OPERATION TIMER

SYNCHRONIZED PUMP SPEED

HARDWARE

DIGITAL

HARDWARE

DIGITAL

INPUT

INPUT

ANALOG

ANALOG

X

OUTPUT

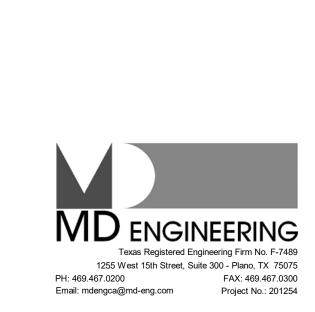
OUTPUT

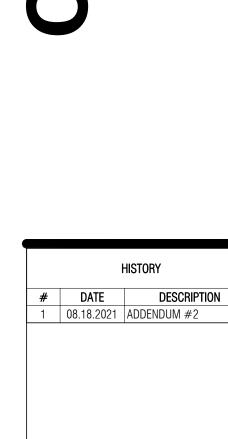
DIGITAL

ANALOG

ANALOG

DIGITAL





SOFTWARE

SOFTWARE

**PROGRAMS** 

**PROGRAMS** 

**ALARMS** 

ALARMS

CONTROL POINTS -MECHANICAL

MICHAEL JOSEPH SMITH

MARK	ELECTR	IC DATA	GPH RECOVERY AT	INPUT	STORAGE	COMBUSTION	EXHAUST	WEIGHT	MANUFACTURER AND MODEL	REMARK
IVIARK	SERVICE	Amps	AT 100°F RISE	M.B.H.	CAPACITY (GAL)	AIR INTAKE	FLUE	LB.	MANOFACTORER AND MODEL	KEWAKK
B-1	120/1	5.0	873	750	225	6"	6"	1,700	PVI 75 L 225A-PVX	1, 2
B-2	120/1	5.0	873	750	225	6"	6"	1,700	PVI 75 L 225A-PVX	1, 2
NOTES:										

1. PROVIDE AND INSTALL A CO SENSOR INTERLOCKED TO THE BURNER CONTROLLER FOR UNITS MONITORED BY THE FIRE ALARM SYSTEM 2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

PUMF	SCHEDUL	E								
DESIG.	TYPE	SERVES	GPM	HEAD FT	HP	V/PH	RPM	MFG	MODEL NUMBER	NOTES
RP-1	RECIRC PUMP	DOMESTIC HOT WATER JAIL	10	40	1/2	115/1	-	GRUNDFOS	UPS 26-150SF	1
SP-1	SUMP PUMP	ELEVATOR PIT	50	40	1/2	115/1	3450	PENTAIR	ME50S-11	2
BP-1	BOOSTER PUMP	DOMESTIC WATER SYSTEM	220	50	5	208/3	3500	TIGERFLOW	CD20-2	3

1. PROVIDE WITH AQUASTAT SET AT 120F TO ENERGIZE/DENERGIZE PUMP

2. PROVIDE ALARM REQUIREMENTS AS REQUIRED BY TDLR. LOCATE AS DIRECTED BY OWNER 3. FACTORY PRE-ASSEMBLED BOOSTER PUMPS. FOLLOW MANUFACTURERES RECOMMENDATIONS WATER SOFTENER

	1	MARK	ELECTRI SERVICE	CAL DATA AMPS	MAX GPM	BACKWASH GPM	POUNDS OF	F MAX SALT FER REFENERATION	SPACE REQUIRED (WXDXH)	SOFTEMING CAPACITY	WEIGHT IN	MANUFACYURER AND MODEL	REMARKS
>		WS-1	120/1	2.5	120	12	100	105	24"X80"X89	210 K	1200	WATTS PWS20131G21	1, 2, 3
`		MOTES:	~~ <u> </u>	~ <b>/</b>	又 ,	~ ~	\	\	7 // /	~ ~	7		<del>\</del> \ \ \ \ \

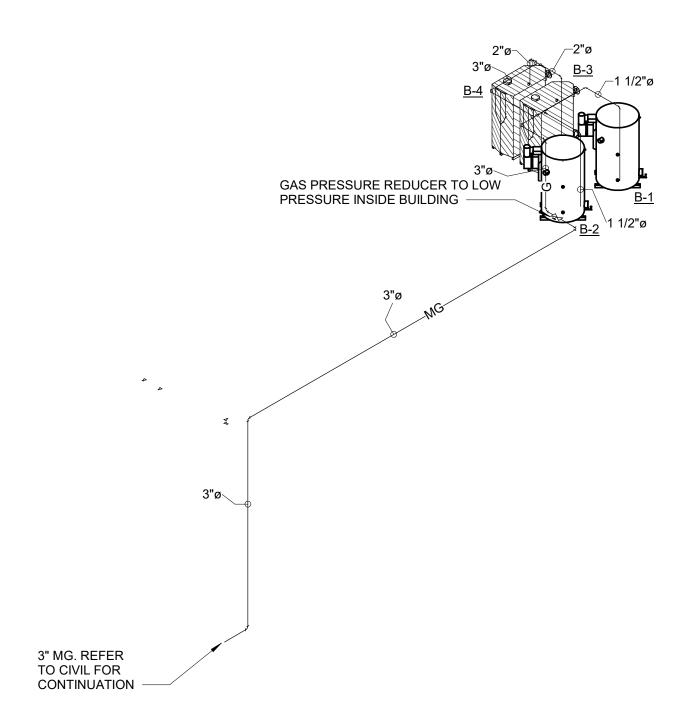
1. PRIOR TO SUMBITTING WATER SOFTNER SUBMITTAL, CONTRACTOR SHALL SEND WATER SAMPLE TO APPROVED LAB FOR WATER ANALYSIS TO CONFIRM WATER SOFTENER...
2. ALL ITEMS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH ALL APPLICABLE CODES. 3. THE WATER SOFTNER SCHEDULE IS A DUPLEX SYSTEM

OIL I	NTERC	<b>EPTO</b>	R								
MARK	ELEVATOR CABS	TOTAL CAPACITY	FLOW RATE (GPM)	DIAMETER	HEIGHT	DISCH SIZE	INLET FL1	OUTLET FL2	MANUFACTURER	MODEL	REMAR
OI-1	1	100 GAL	50	30"	44"	2"	35"	32"	PARK	ELVS-100	1, 2

1. INTERCEPTOR SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH ALL APPLICABLE CODES. 2. PROVIDE PUMP CONTROL PANEL WITH HIGH LEVEL ALARM

FIVTURE	OLIANITITY	SANITA	ARY SEWER	DOMESTIC WATER			
FIXTURE	QUANTITY	D.F.U. VALUE	D.F.U. SUBTOTAL	W.S.F.U. VALUE	W.S.F.U. SUBTOTAL		
WATER CLOSET -FLUSH VALVE	13	6	78	10.0	130		
COMBINATION FIXTURE	86	6	516	10.0	860		
LAVATORY	16	1	16	2.0	32		
SHOWER HEAD (PRIVATE < 5.7 GPM)	28	2	56	1.4	39.2		
SINK	9	2	18	1.4	12.6		
SERVICE SINK	11	2	22	3.0	33		
SALON SINK	3	2	6	1.4	4.2		
3" FLOOR DRAINS	123 5		615	-	-		
3" FLOOR SINKS	8 5		40	-	-		
4" FLOOR SINKS	1	6	6	-	-		
HOSE BIBB	21	-	-	2.75	57.75		
WASHING MACHINE (8LB - PRIVATE)	1	2	2	1.4	1.4		
WASHING MACHINE (15LB - PUBLIC)	1	3	3	4.0	4		
DRINKING FOUNTAIN	6	0.5	3	0.25	1.5		
COFFEE BREWER	2	-	-	0.5	1		
REFRIGERATOR	2	-	-	0.5	1		
ICE MACHINE	1	-	-	4.0	4		
CALCULATIONS BASED UPON		GRAND TOTAL	4004	GRAND TOTAL 1181.65 DOM WATER WSFU			
2018 INTERNATIONAL PLUMBING CODE		SEWER D.F.U.	1381				
		BUILDING	S SEWER SIZE	GPM = 230.5			
		AT 1/8"/F	T SLOPE = 8"	BLDG. SUPPLY SIZE \$\\ 4" \\ \}			

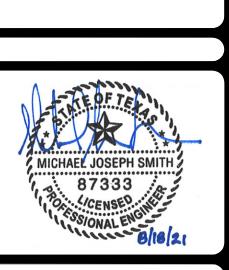
NATURAL GAS DEMAND SCHEDULE										
EQUIPMENT	CFH	BRANCH PIPE SIZE								
B-1	750	1-1/2"								
B-2	750	1-1/2"								
B-3	1500	2"								
B-4	1500	2"								
CALCULATIONS BASED UPON	4,500									
2018 INTERNATIONAL FUEL GAS CODE	LONGEST RUN =50'									
	GAS MAIN DELIVERY PRESSURE = 2.0 PSI SYSTEM PRESSURE = 0.5 PSI									



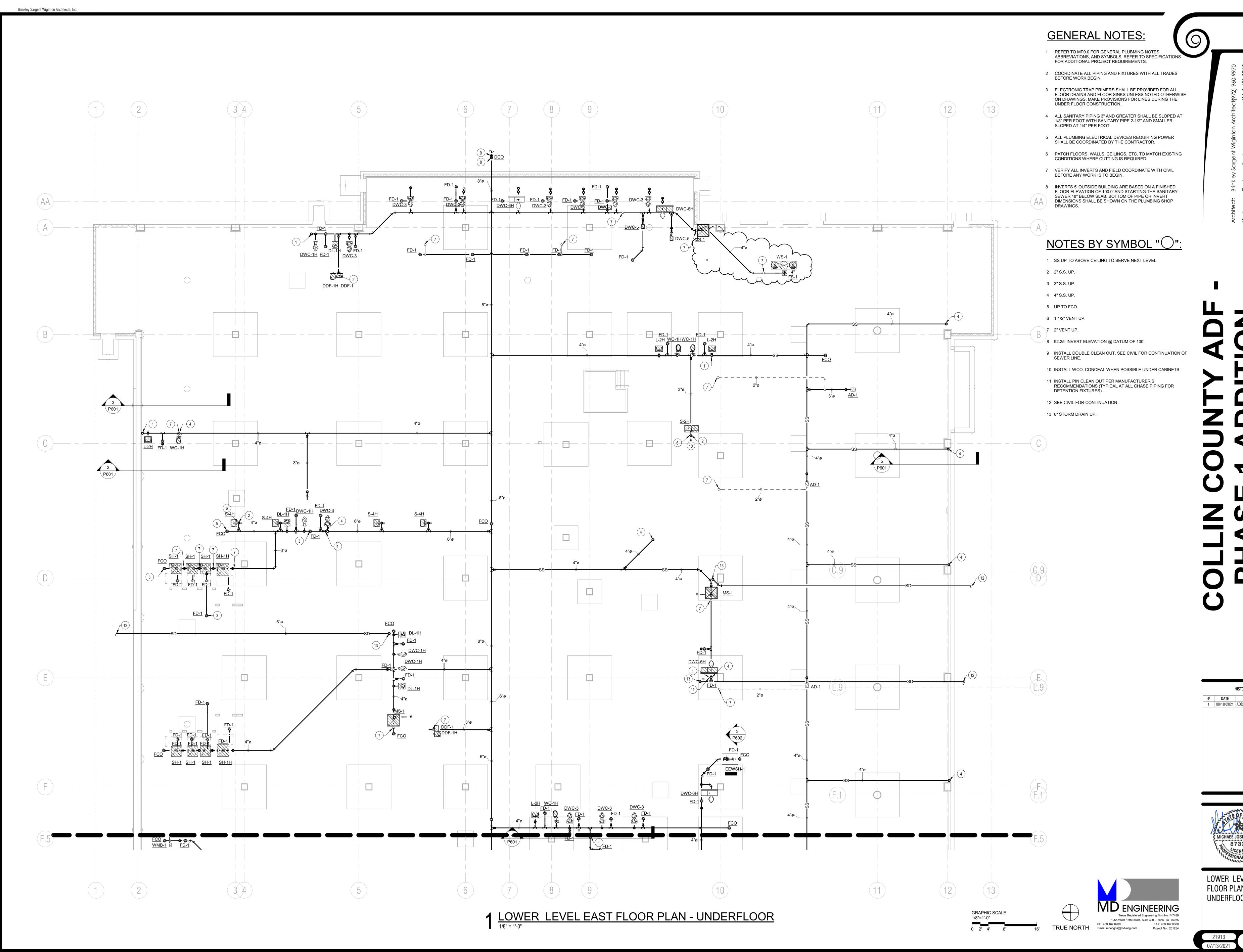
1 GAS RISER



BRINKLEY SARGENT WIGINTONARCHITE

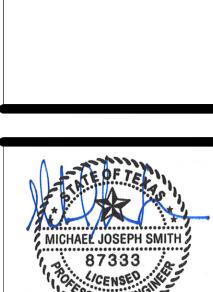


SCHEDULES -PLUMBING

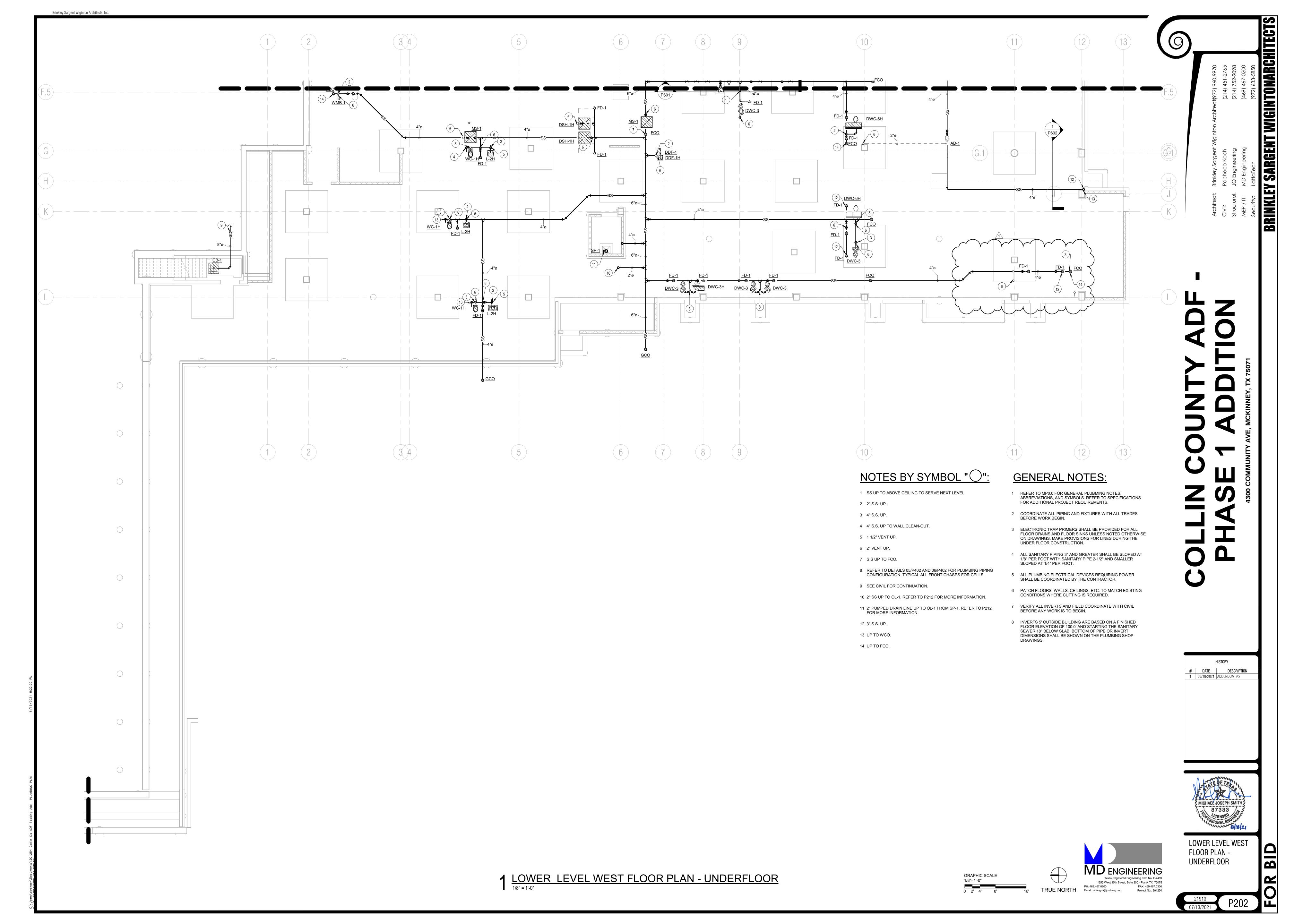


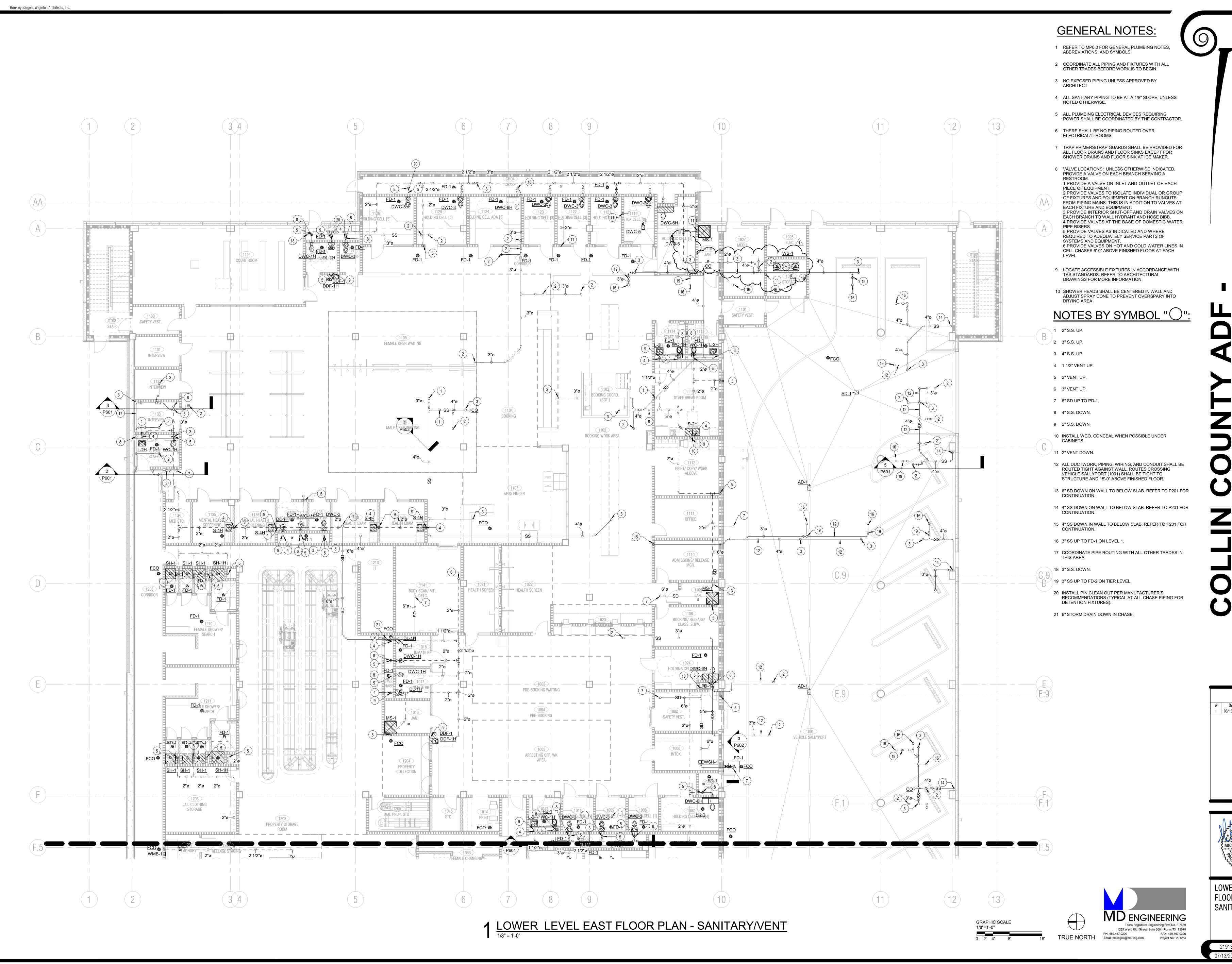
SARGENT WIGINTONARC

# DATE DESCRIPTION
1 08/18/2021 ADDENDUM #2



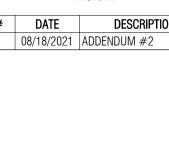
LOWER LEVEL EAST FLOOR PLAN -UNDERFLOOR

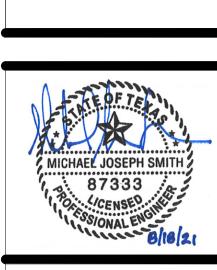




WIGINTONARCH

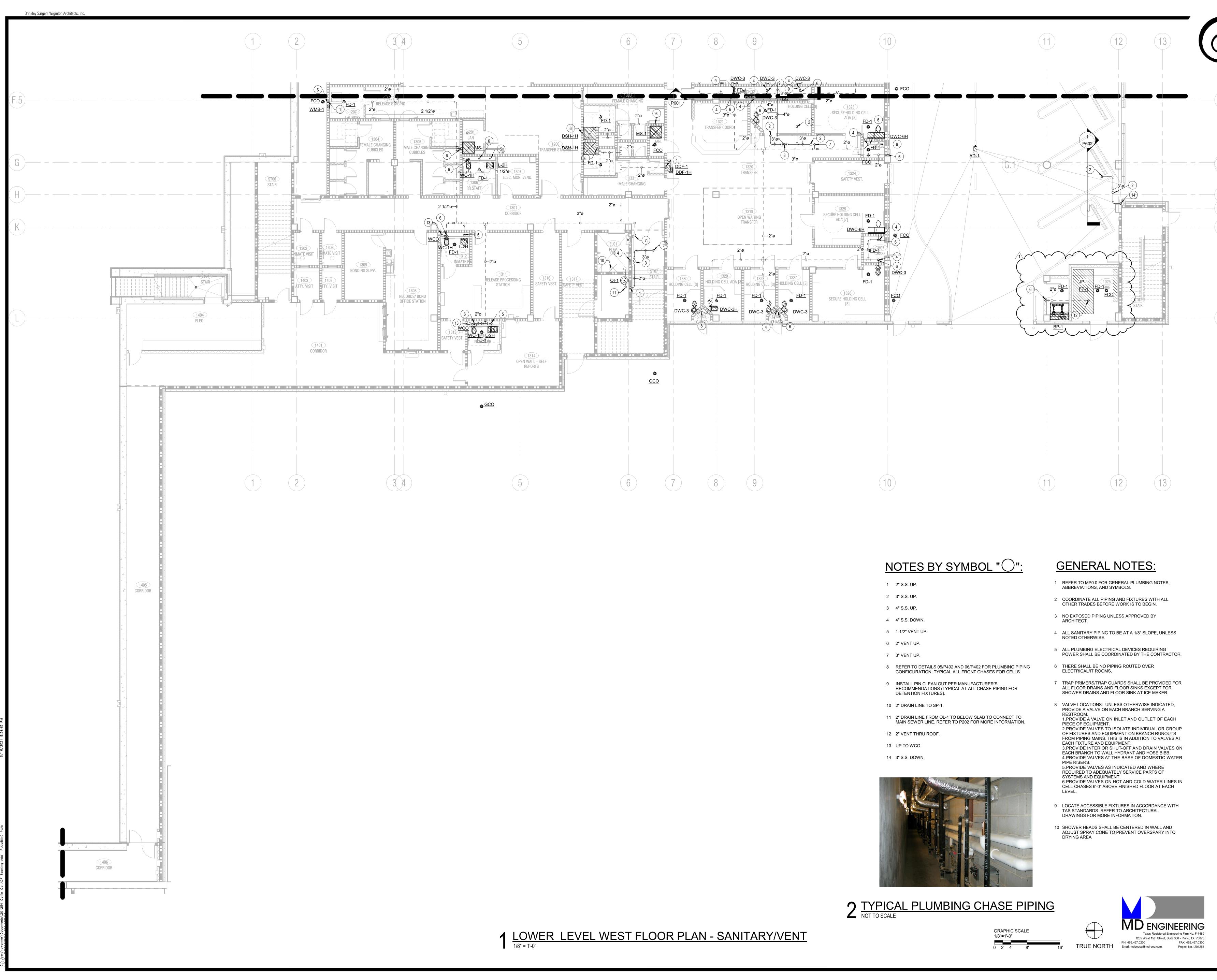
# DATE DESCRIPTION 1 08/18/2021 ADDENDUM #2





LOWER LEVEL EAST FLOOR PLAN -

SANITARY/VENT



COLLIN COUNTY AD PHASE 1 ADDITIO

HISTORY

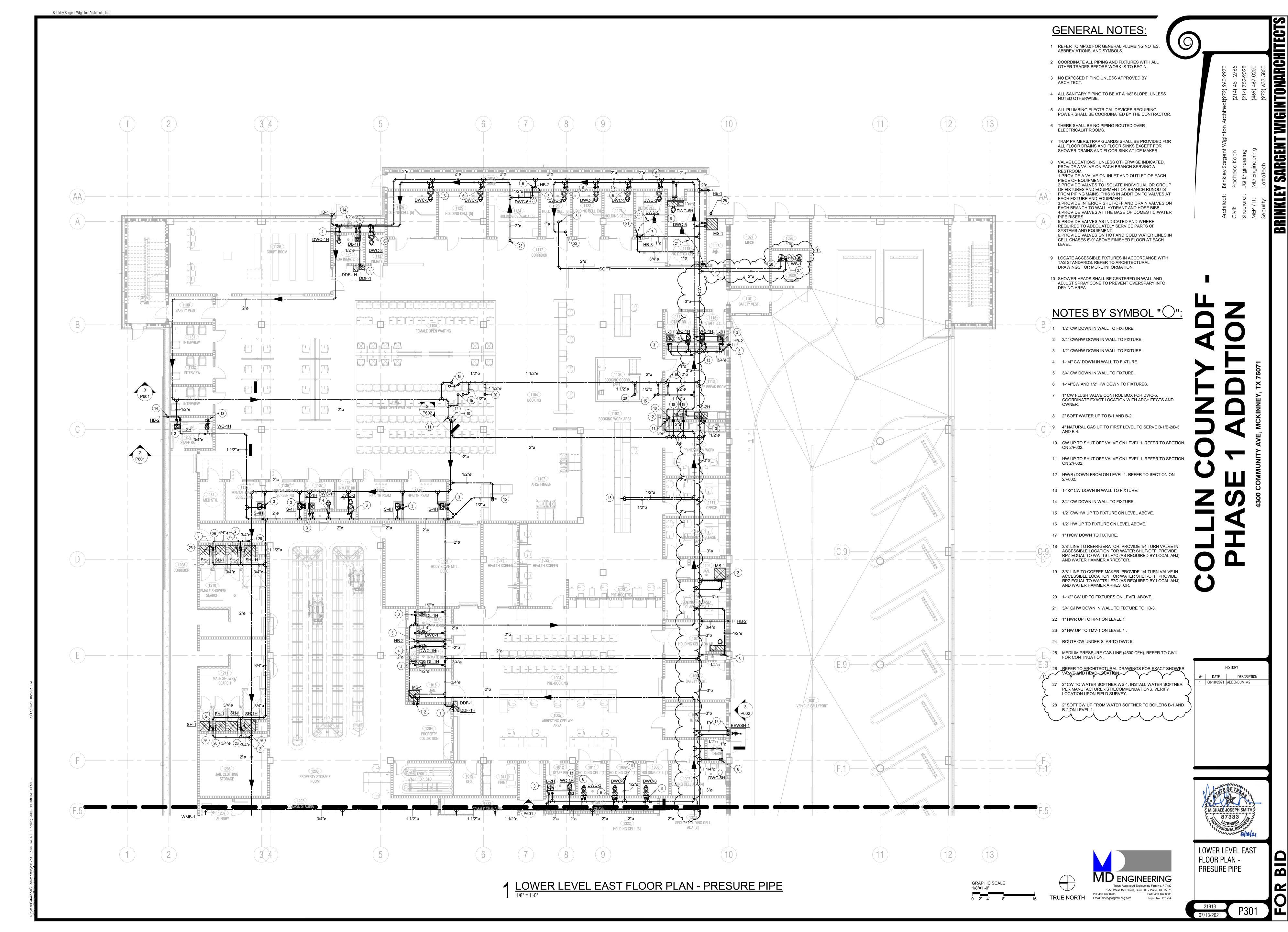
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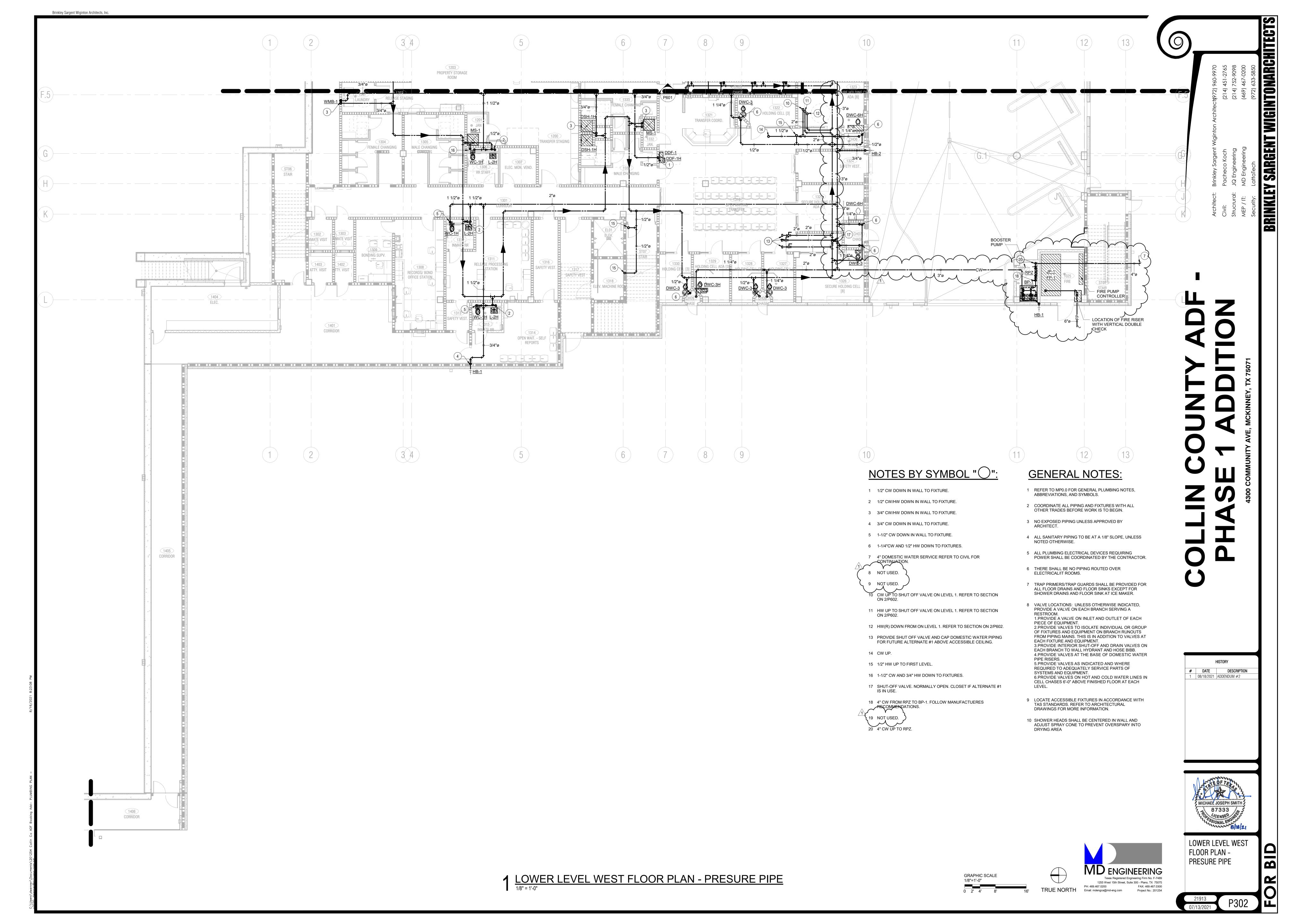
1 | 08/18/2021 | ADDENDUM #2

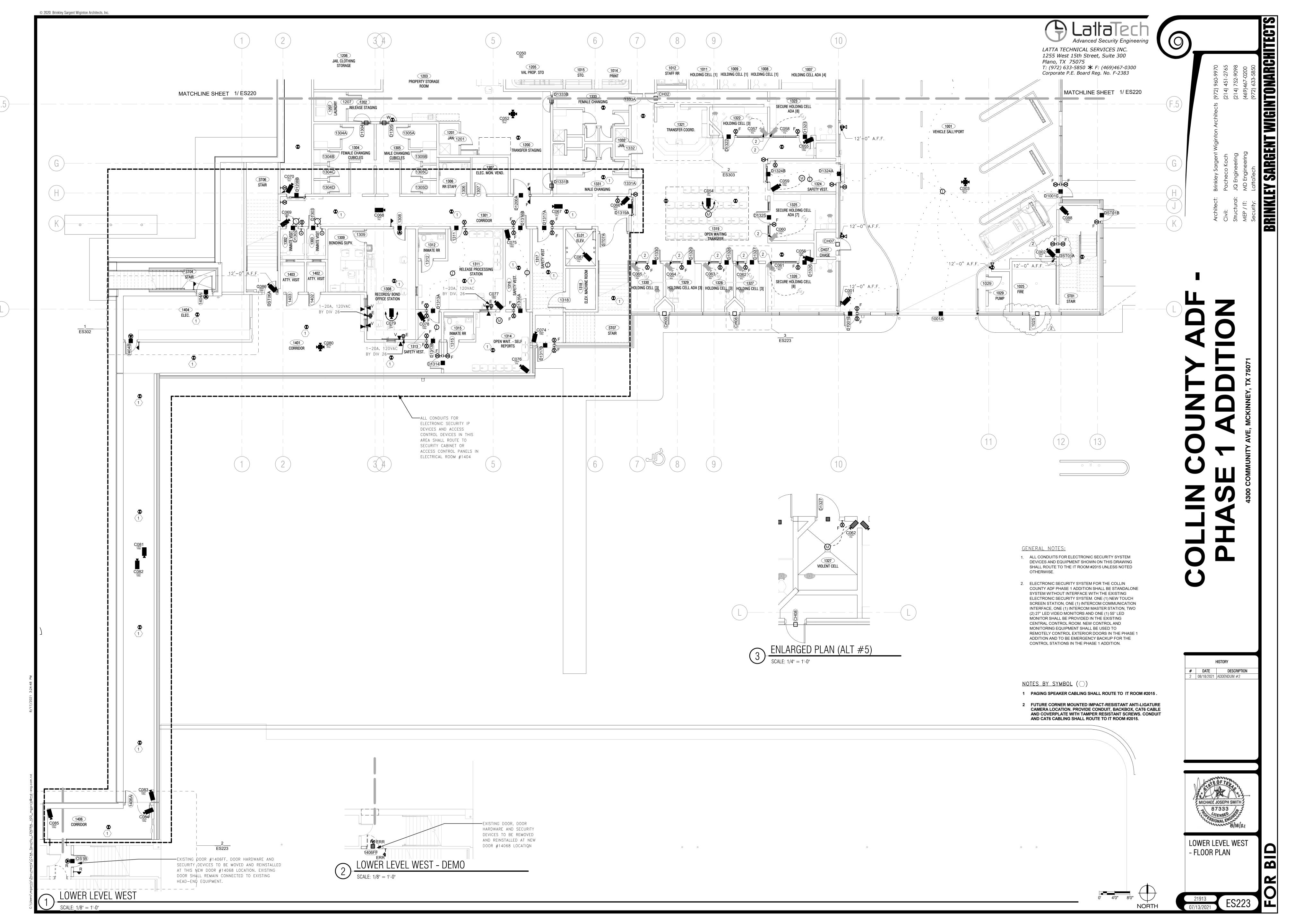
LOWER LEVEL WEST

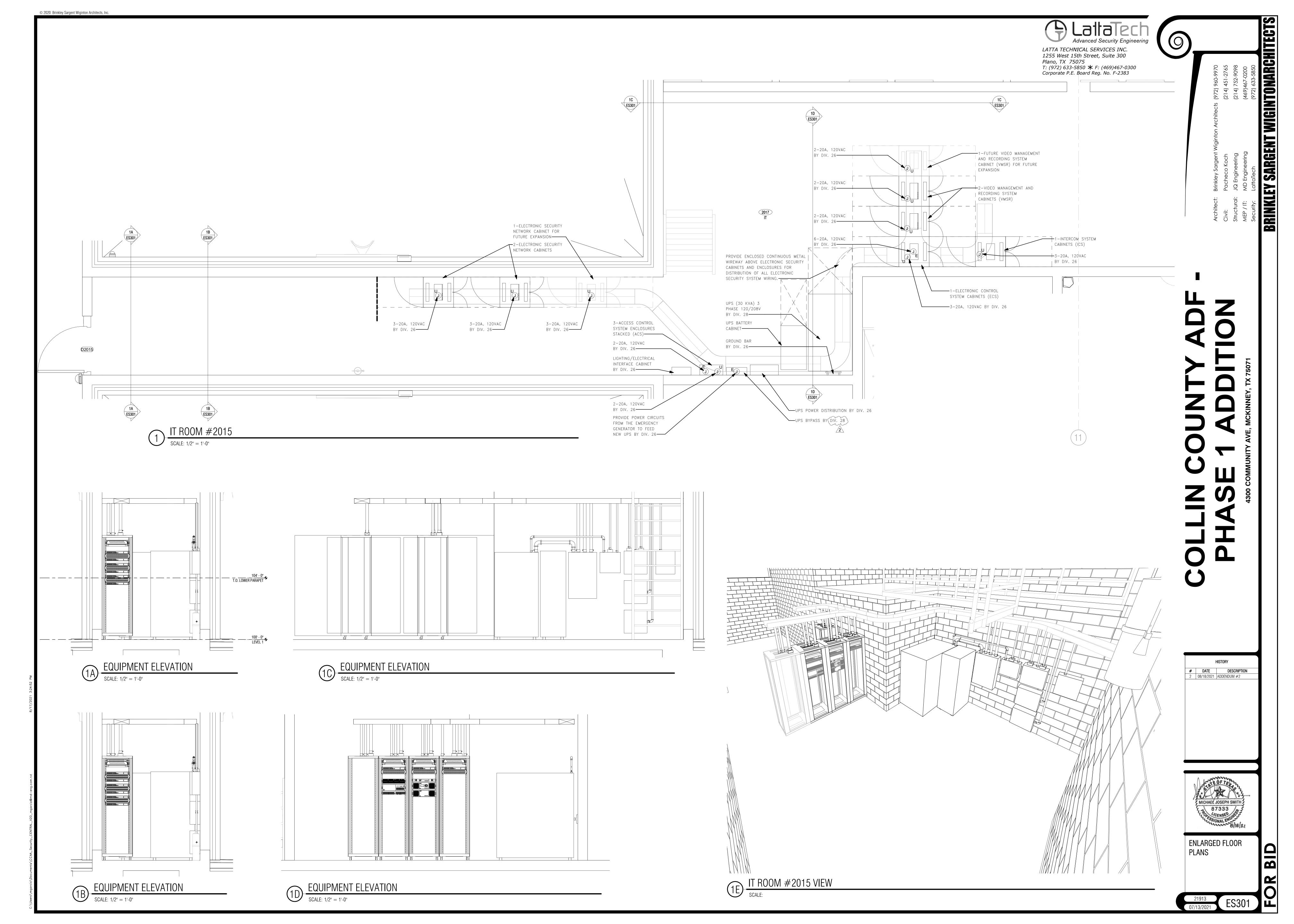
FLOOR PLAN -

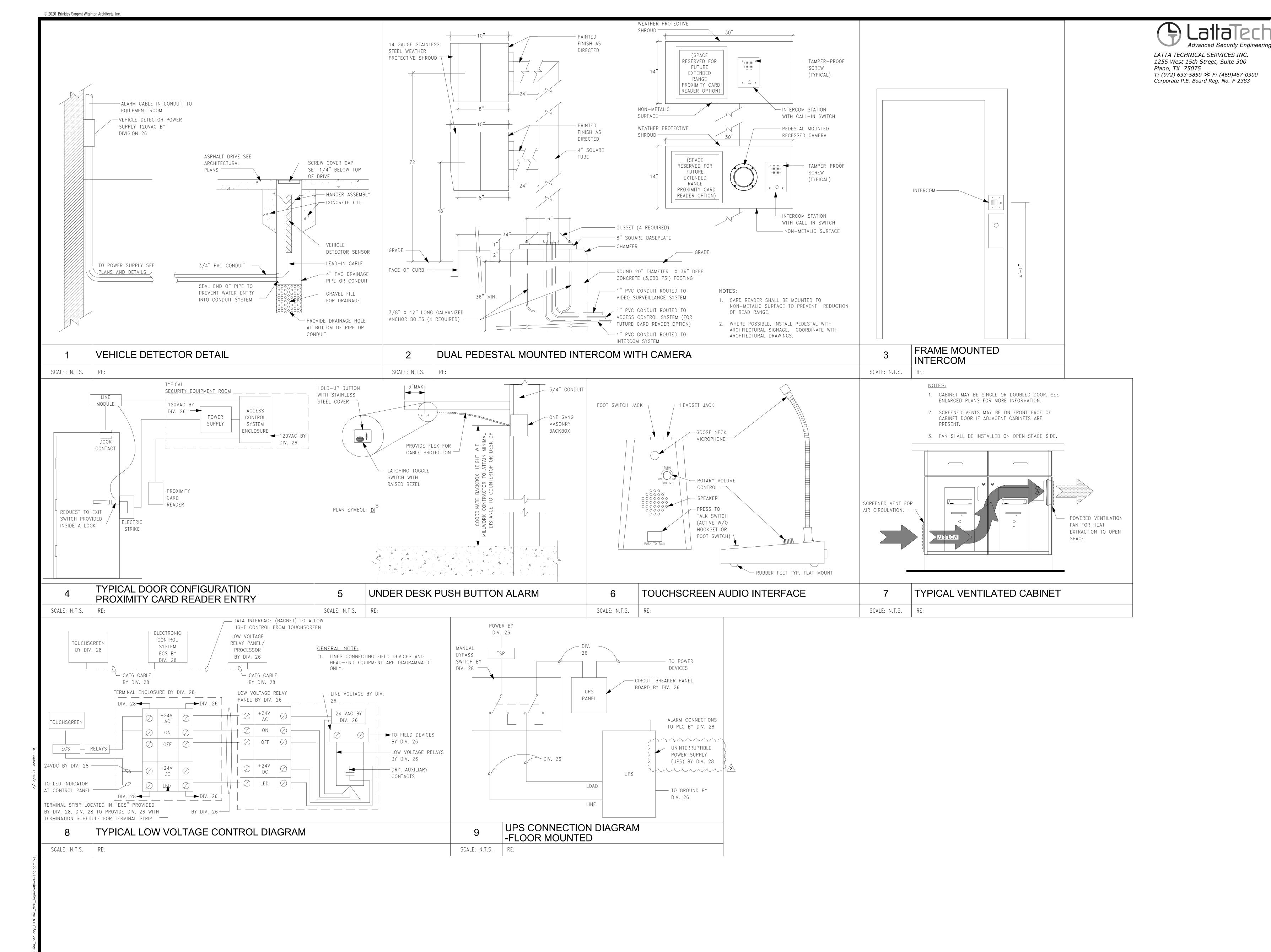
SANITARY/VENT









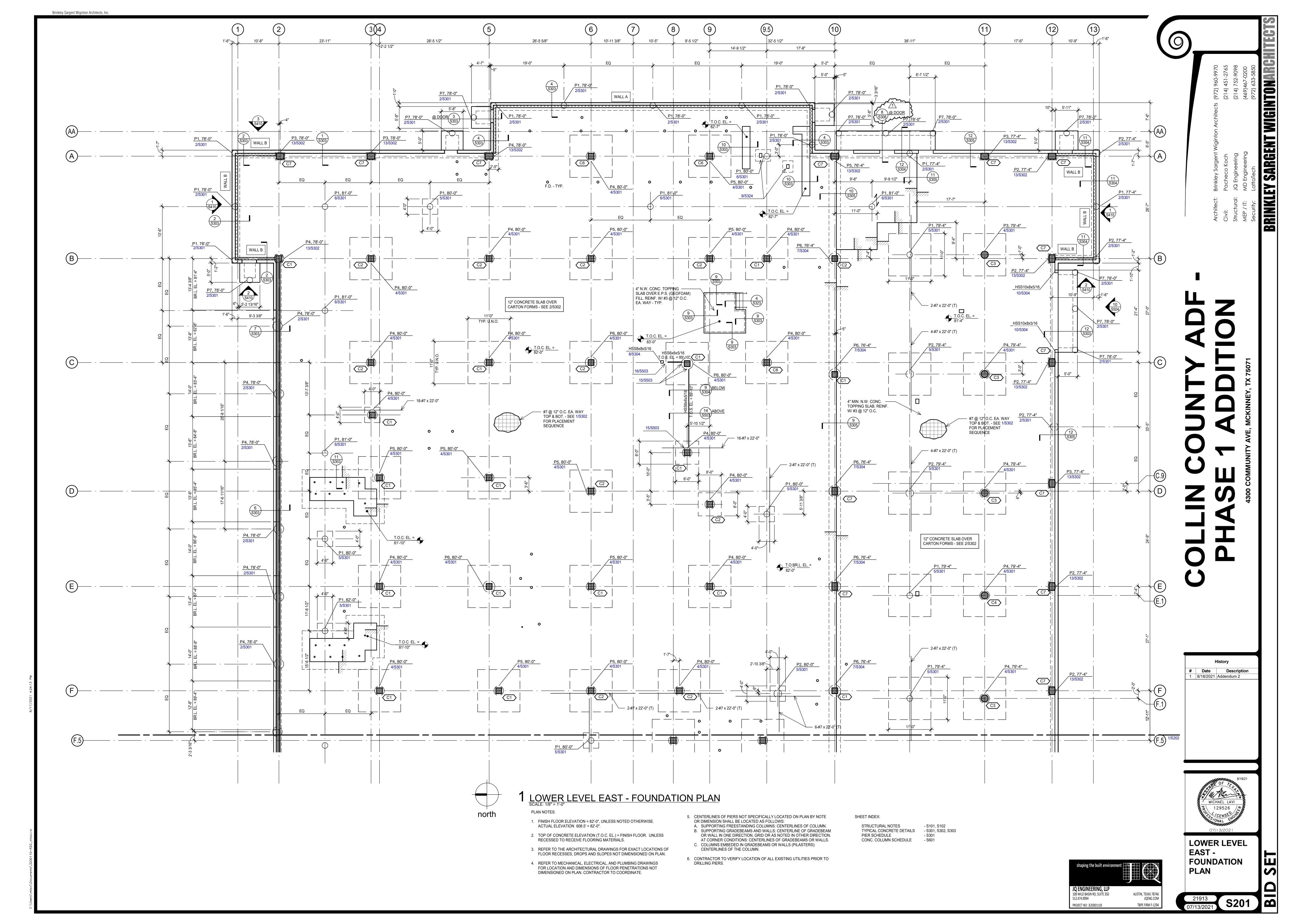


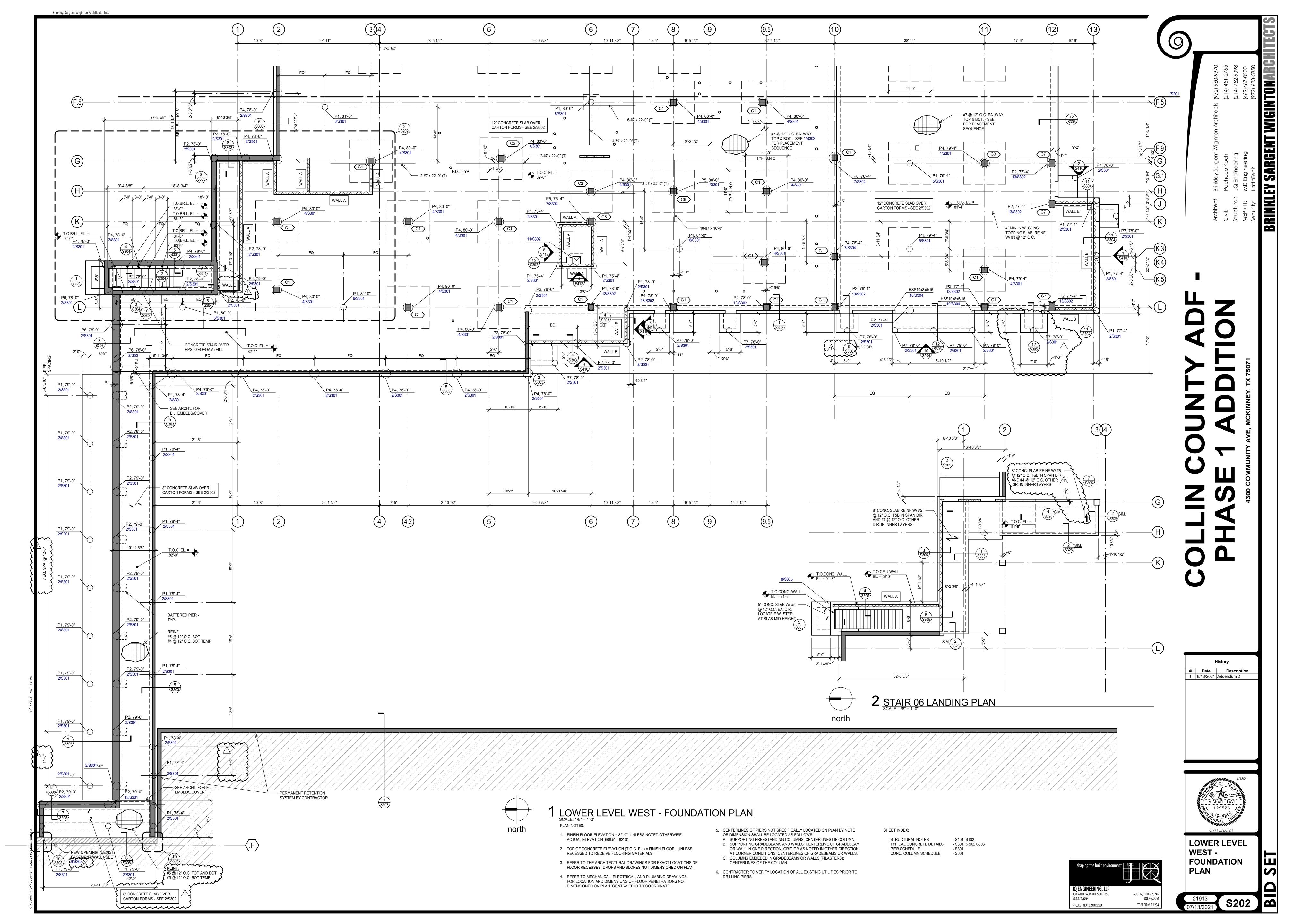
(97) (21) (21)

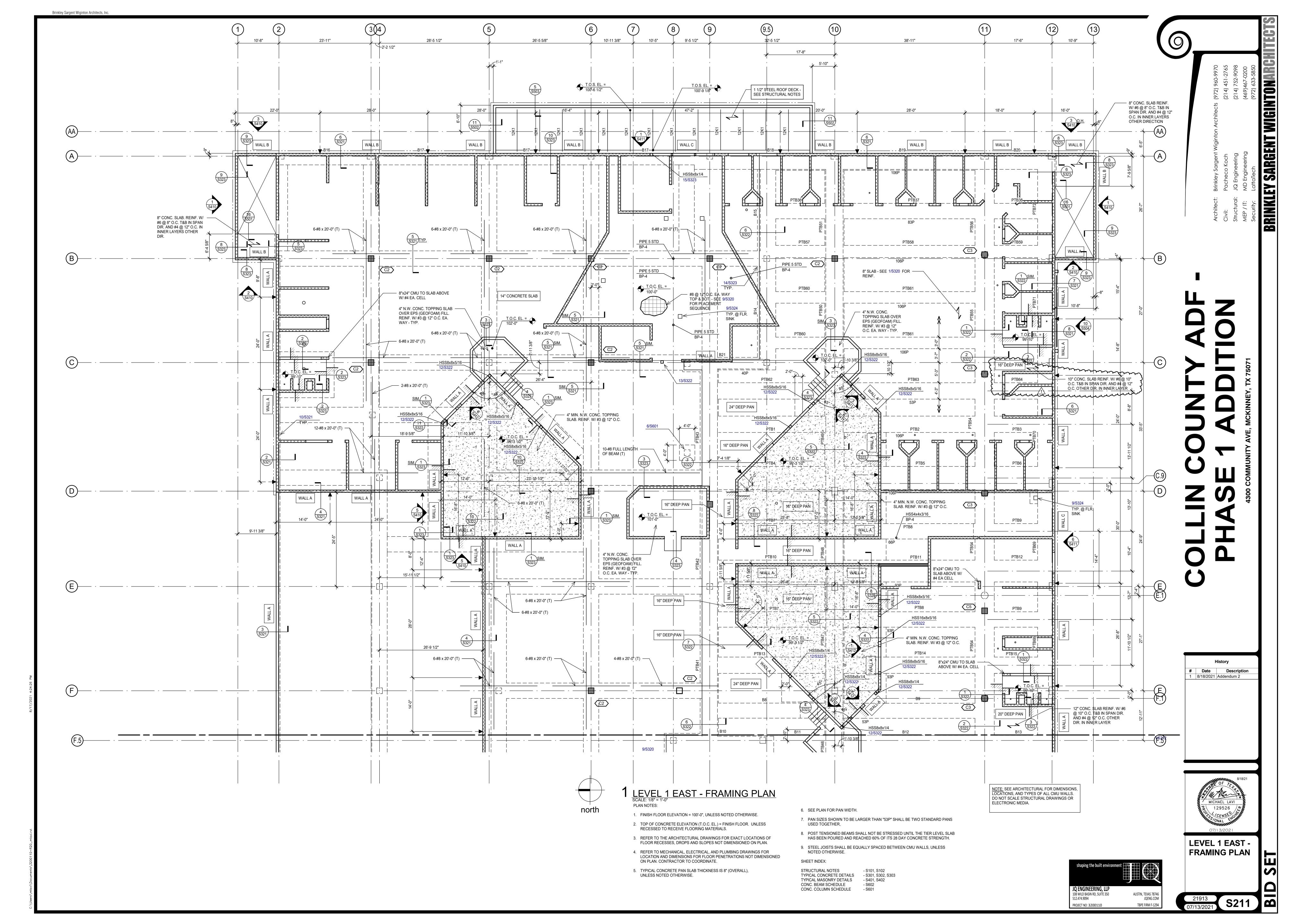
HISTORY

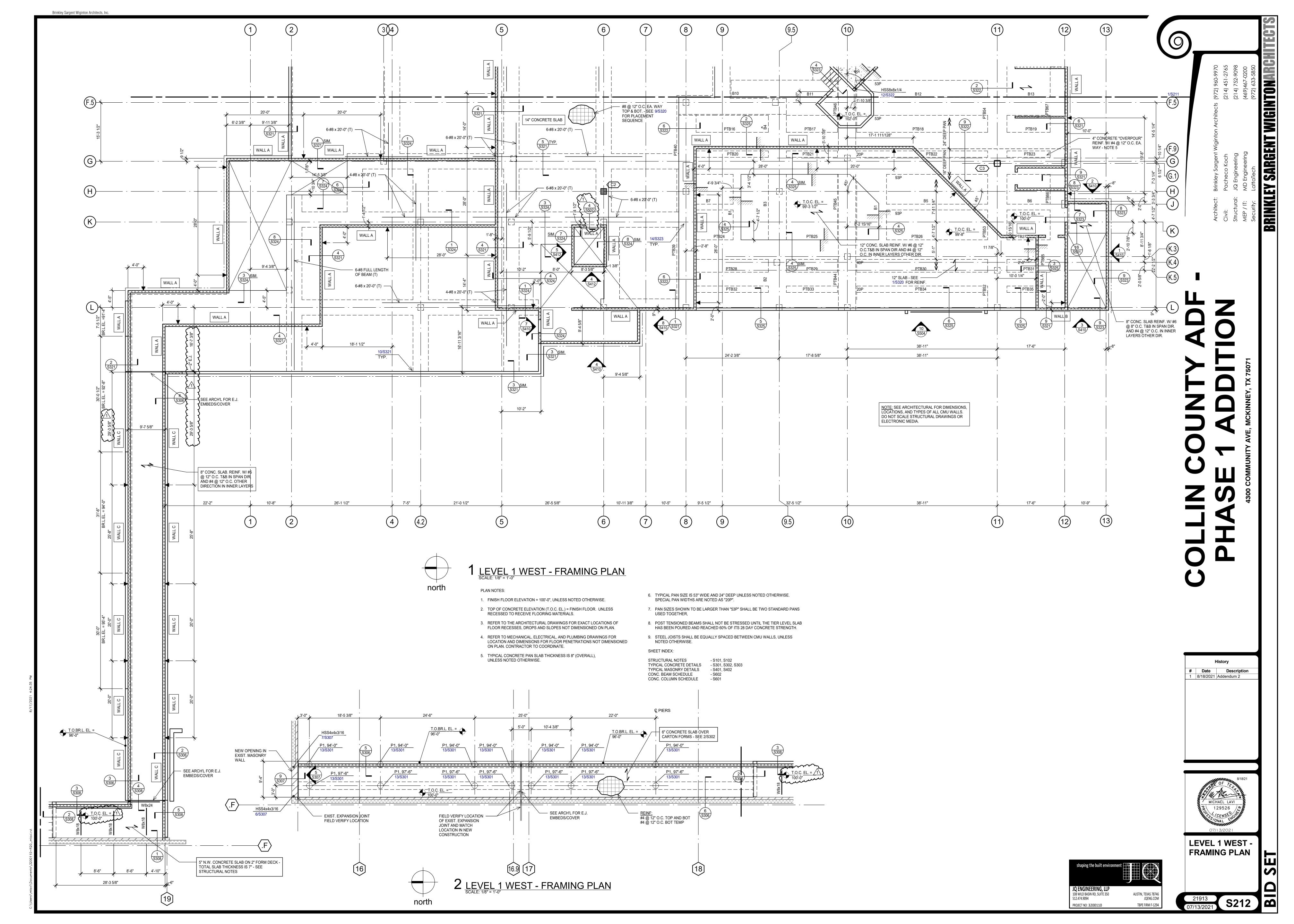
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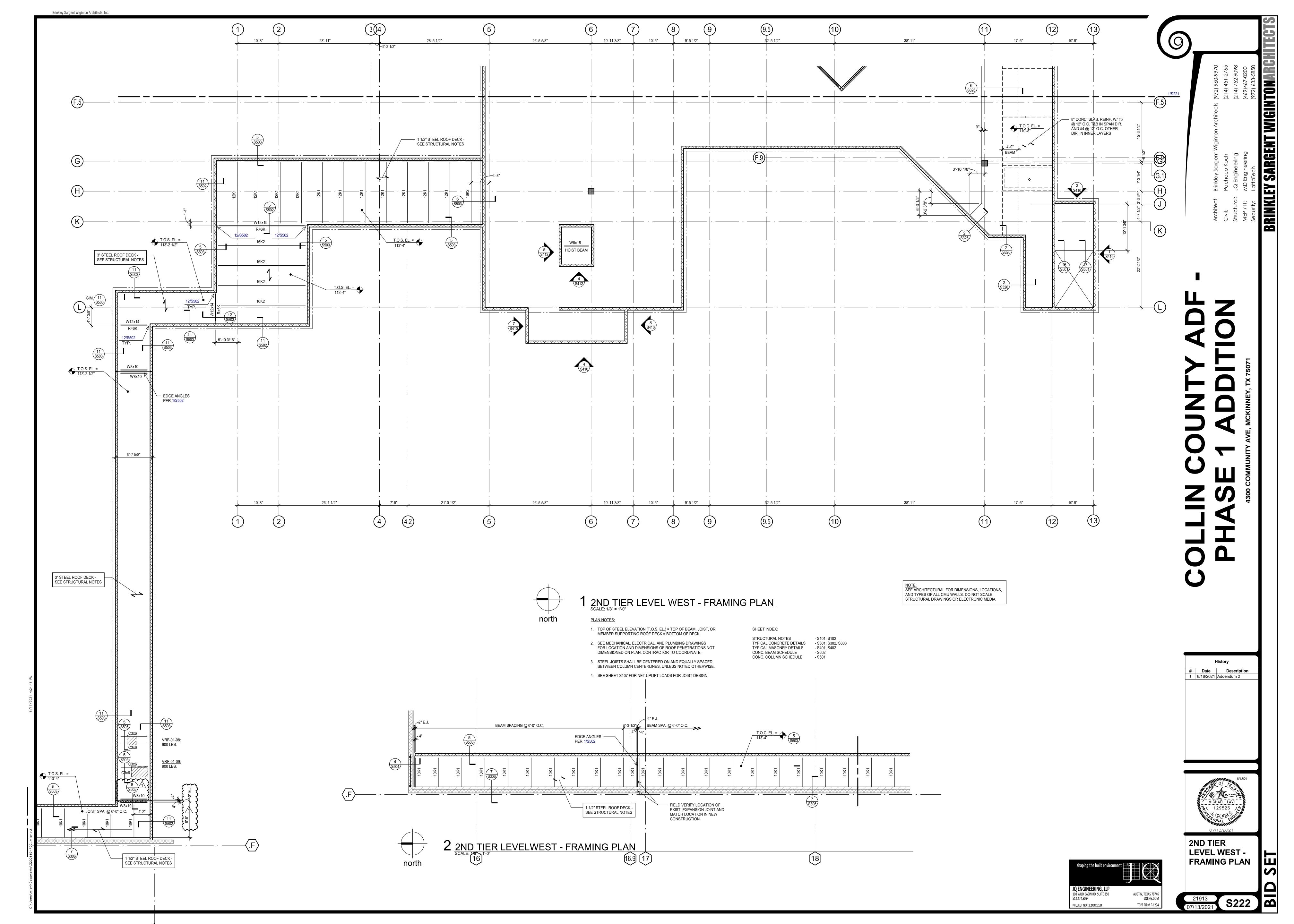
2 08/18/2021 ADDENDUM #2

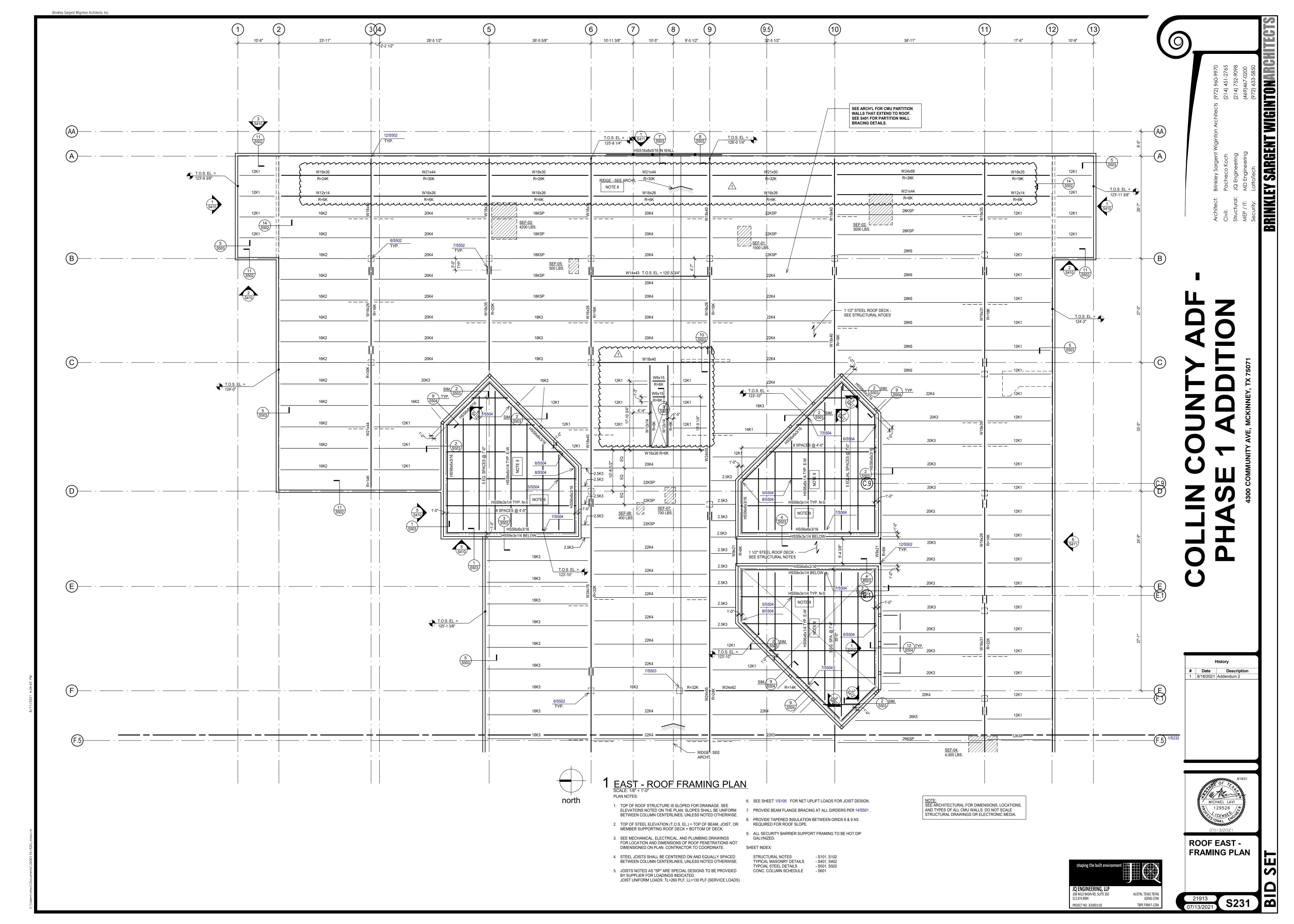


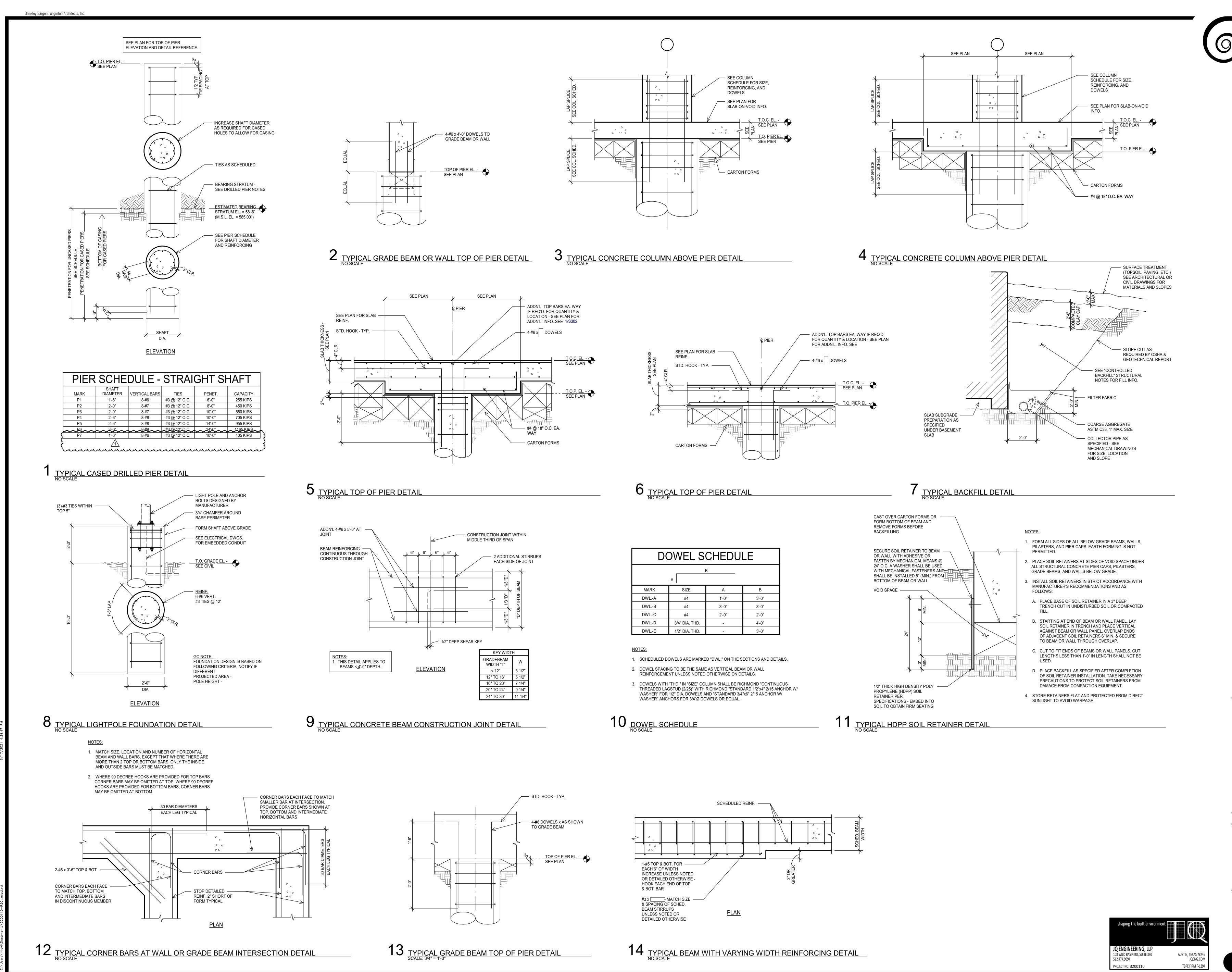












OLLIN COUNTY ADF -PHASE 1 ADDITION

2 4 4 9

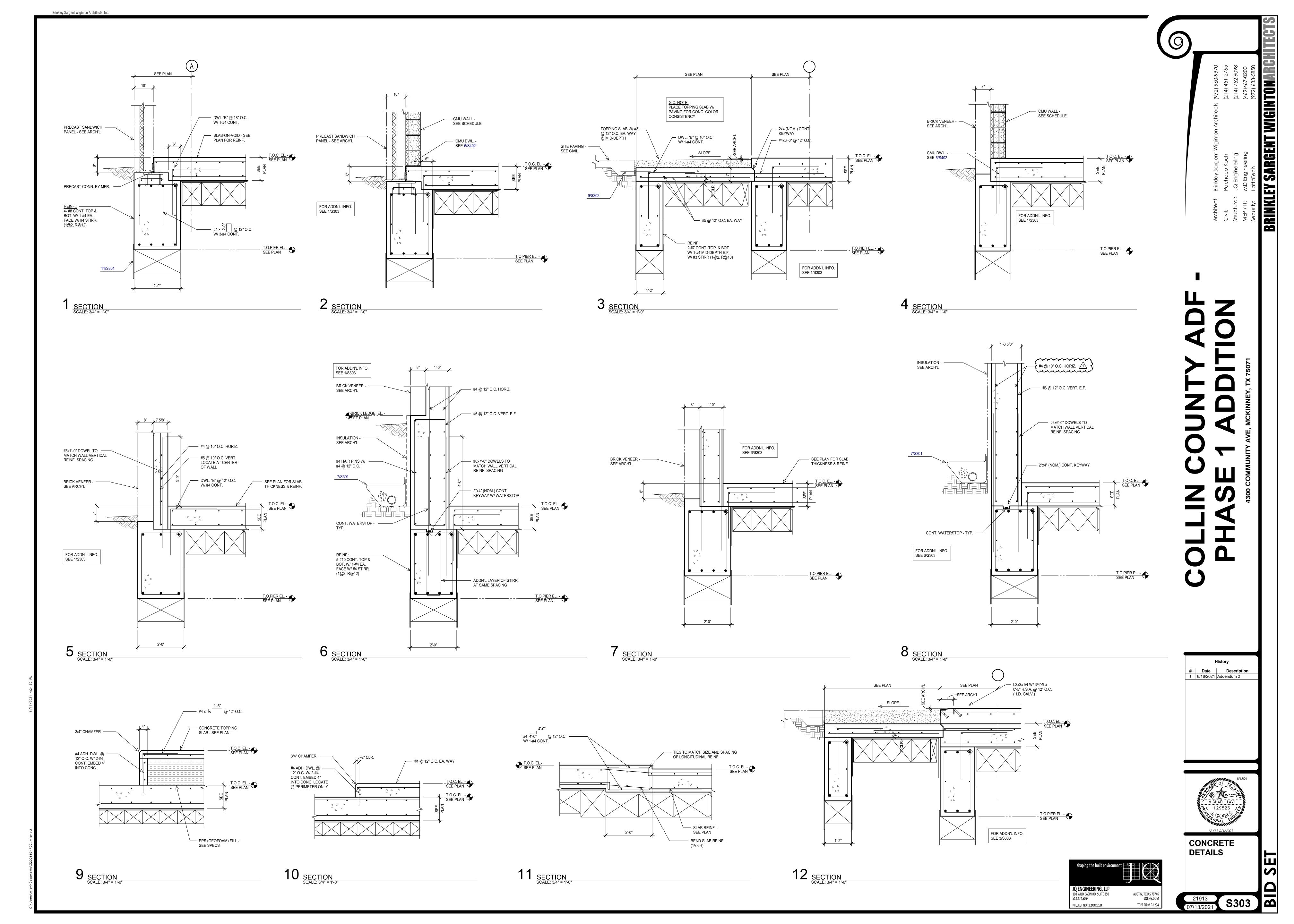
913 S/2021 S301

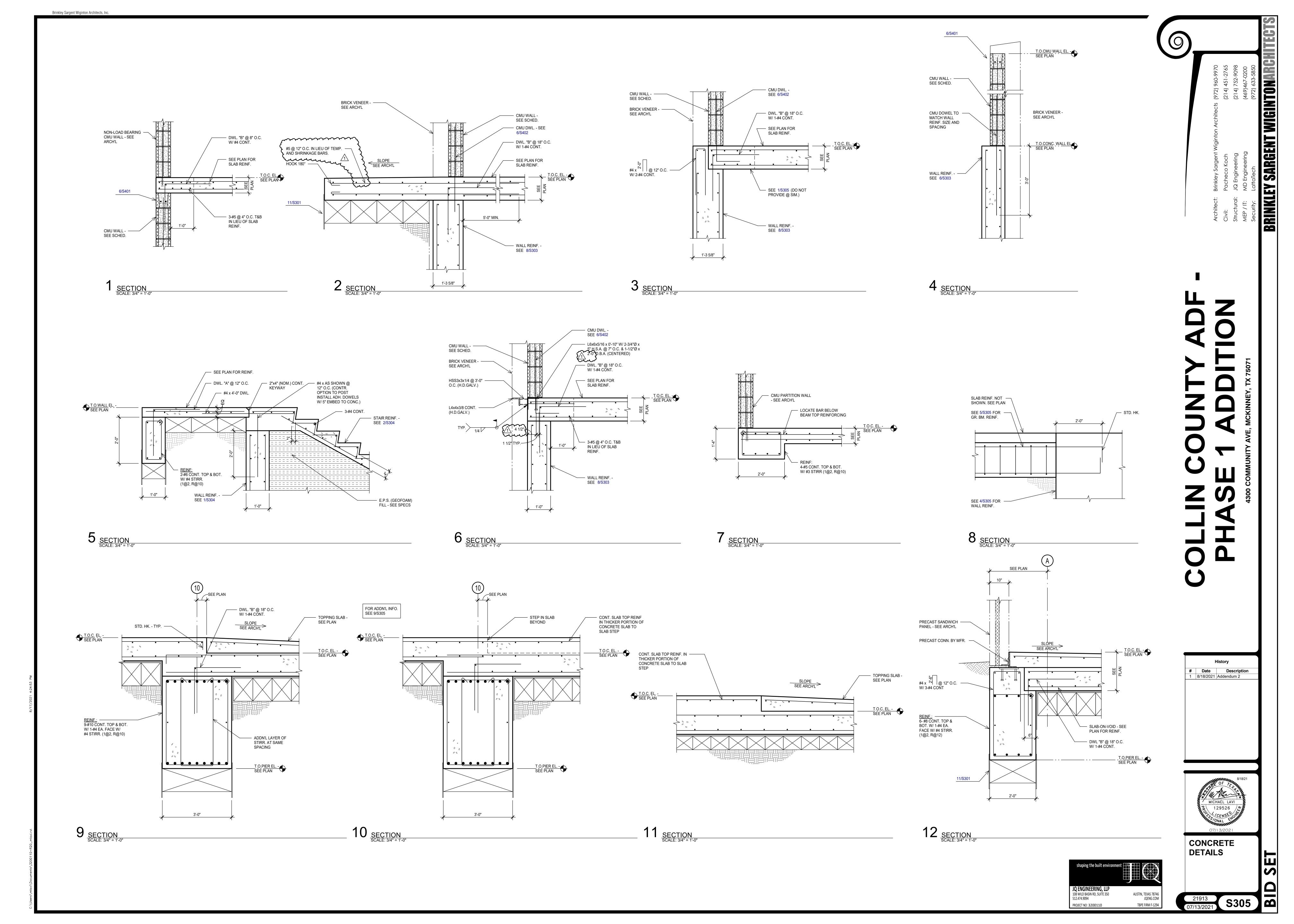
TYPICAL CONCRETE

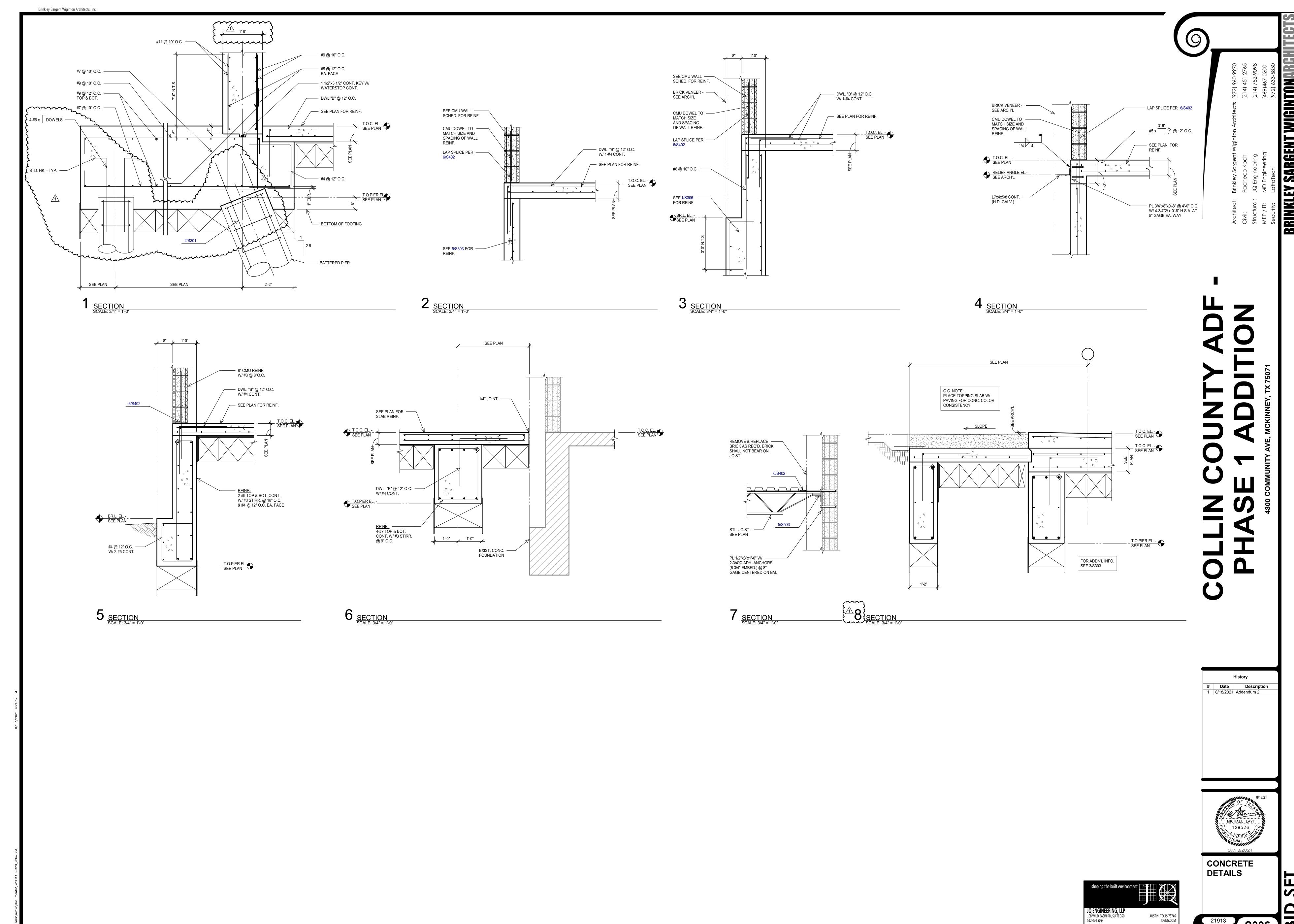
DETAILS

# Date Description

1 8/18/2021 Addendum 2



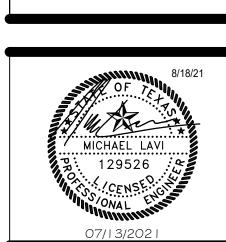




AUSTIN, TEXAS 78746 JQENG.COM TBPE FIRM F-1294

PROJECT NO: 3200110

— 3/4" CHAMFER, TYP.



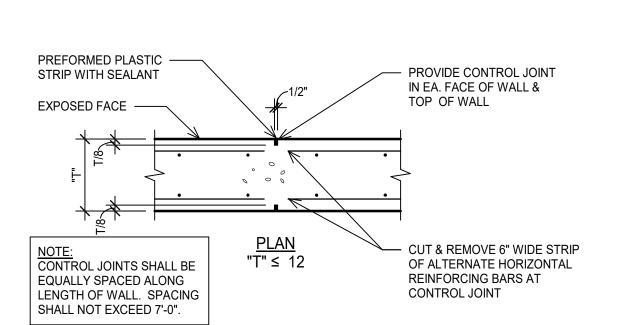
CONCRETE DETAILS



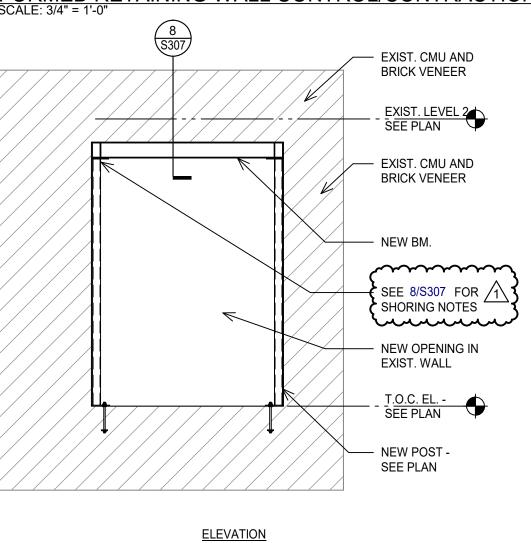
VEHICLE BARRIER -IMPACT LOADS T.O.WALL EL.-CLASS A EXPOSED CONCRETE RUBBED FINISH WHERE WALL - CRACK CONTROL AND EXPANSION JOINT DETAILS AND SPACING BY SPECIALITY RETENTION SYSTEM DESIGN. IN NO CASE SHALL CONTROL AND EXPANSION DOINT SPACINGS EXTENDS ABOVE FINISH GRADE -SEE CIVIL PLANS FOR LOCATIONS GRADE - SEE CIVIL ----EXCEED 10'-0" AND 90'-0" RESPECTIVELY. **EXISTING PAVING TO** REMAIN UNDAMAGED - CLASS A EXPOSED CONCRETE RUBBED PAVING - SEE CIVIL DRAINAGE SYSTEM, AS REQ'D. SOLDIER PILE RETAINING — WALL TO BE DESIGNED / └── STORM DRAIN -INSTALLED BY SPECIALTY SEE CIVIL FOUNDATION CONTRACTOR -SEE STRUCTURAL NOTES NOTE:
GRAPHIC REPRESENTATION OF WALL SYSTEM IS NOT INTENTED TO DEFINE SYSTEM ELEMENTS OR DIMENSIONS.

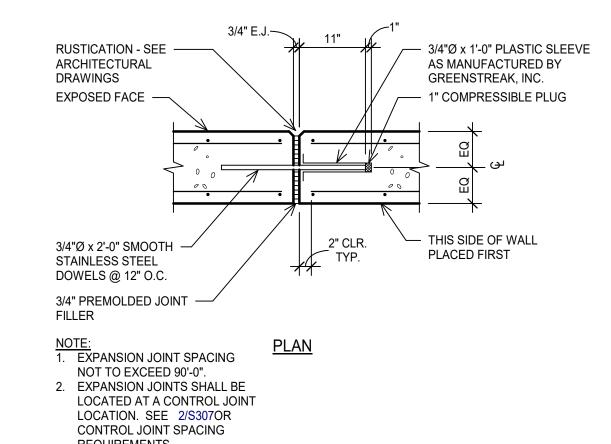
SPECIALTY RETENTION SYSTEMS

- B. Materials
- 1. Steel H-piles shall conform to ASTM A572, Gr. 50. Shotcrete mix shall be designed by Contractor as required to support soil loads and to provide architecturally acceptable finish. Minimum 28 day compressive strength shall be 4,000 psi.
- C. Shotcrete placement shall be in accordance with ACI 506R.
- D. Provide a mockup wall segment of at least 10'-0" long and a minimum of 5'-0" tall for approval by the Architect prior to installation of the complete wall.
- F. Contractor shall coordinate below grade drainage connections to adjacent storm sewer prior to installation of retaining wall.
- site to include the following:
- 5. Signed and sealed calculations including design loads and member sizes.

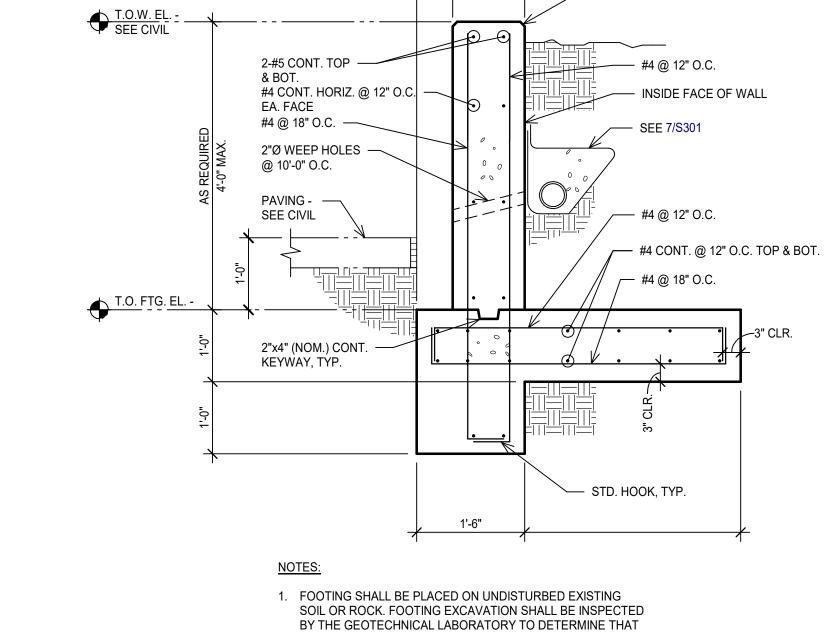


2 FORMED RETAINING WALL CONTROL/CONTRACTION JOINT DETAIL SCALE: 3/4" = 1'-0"





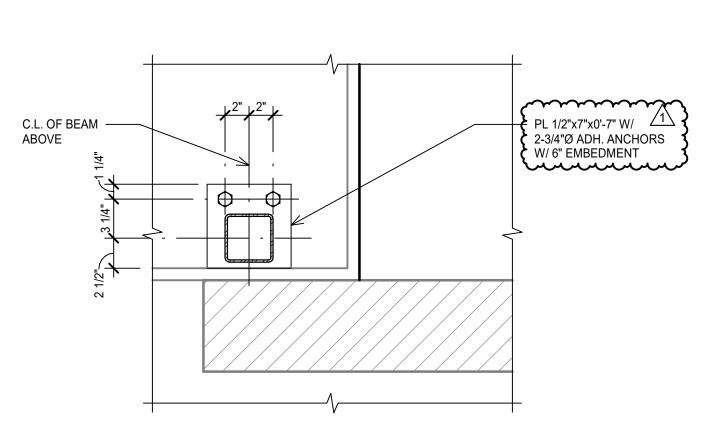
FORMED RETAINING WALL EXPANSION JOINT DETAIL
SCALE: 3/4" = 1'-0"



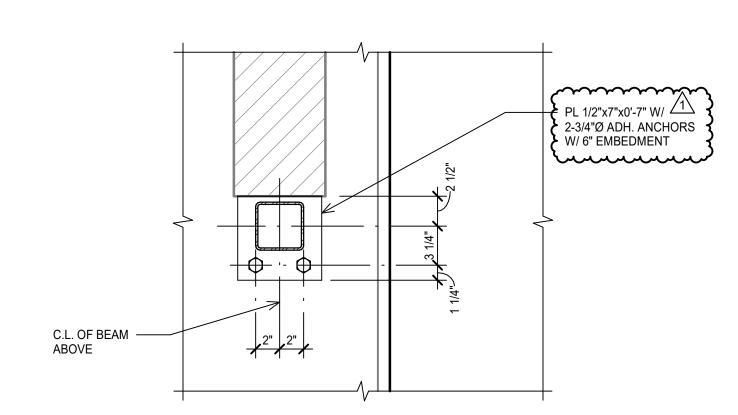
THE PROPER BEARING STRATUM IS OBTAINED AND THAT EXCAVATIONS ARE PROPERLY CLEAN & DRY BEFORE CONCRETE

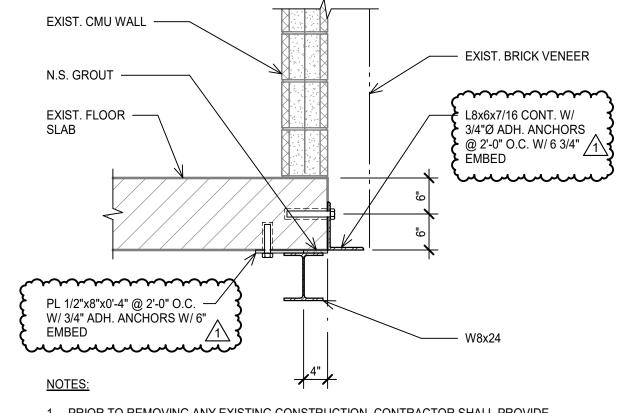
2. FOR BACKFILL BEHIND RETAINING WALLS SEE 7/S301

4 TYPICAL RETAINING WALL DETAIL SCALE: 3/4" = 1'-0"

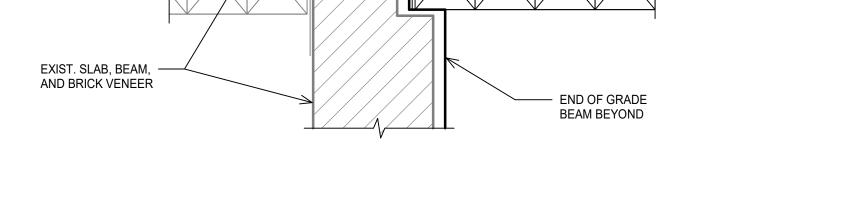


6 BASE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"





- 1. PRIOR TO REMOVING ANY EXISTING CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHORING ADEQUATE TO SUPPORT ALL DEAD AND LIVE LOADS OF THE EXISING BUILDING. SHORING SHALL BE CONSTRUCTED TIGHT TO EXISTING CONSTRUCTION SUCH THAT THERE IS NO MOVEMENT WHEN EXISTING MASONRY IS REMOVED.
- 2. SHORING SHALL BE DESIGNED AND INSTALLED TO PREVENT ANY OVERSTRESS OF EXISTING CONSTRUCTION DURING REMOVAL OF EXISTING MASONRY.
- 3. SHORING LOADS SHALL BE ADEQUATELY DISTRIBUTED TO EXISTING FLOOR STRUCTURE SUCH THAT EQUIVALENT UNIFORM LOAD OF 100 PSF IS NOT EXCEEDED.
- 4. FIELD VERIFY ALL EXISTING CONDITIONS AND INCORPORATE INTO DESIGN AND
- 5. SHORING DESIGN AND DETAILS SHALL BE PERFORMED BY AN ENGINEER LICENSED IN THE
- 6. SHORING SHALL REMAIN IN PLACE UNTIL ALL NEW CONSTRUCTION HAS BEEN ERECTED, FULLY CONNECTED, AND GROUT HAS REACHED COMPRESSIVE STRENGTH OF 3,000 PSI.



JQ ENGINEERING, LLP 108 WILD BASIN RD, SUITE 350 JQENG.CON

TBPE FIRM F-1294 PROJECT NO: 3200110

RETAINING WALL SECTION
SCALE: 1/4" = 1'-0"

A. The design of specialty retention systems shall be based on the referenced geotechnical report parameters, unless additional soil borings are taken at the expense of the Contractor. In addition to soil pressures, retaining wall shall be designed for surcharge live load of 100 psf and vehicle barrier impact loads in accordance with the Building Code.

3. Shotcrete reinforcing shall conform to ASTM A615, Grade 60.

E. Contractor shall coordinate location of all handrail/guardrail posts prior to installation of

G. Specialty retention system designer/installer shall submit shop drawings for review and approval prior to fabrication or construction. Shop drawings shall be signed and sealed by a registered professional engineer licensed in the state having jurisdiction at the project

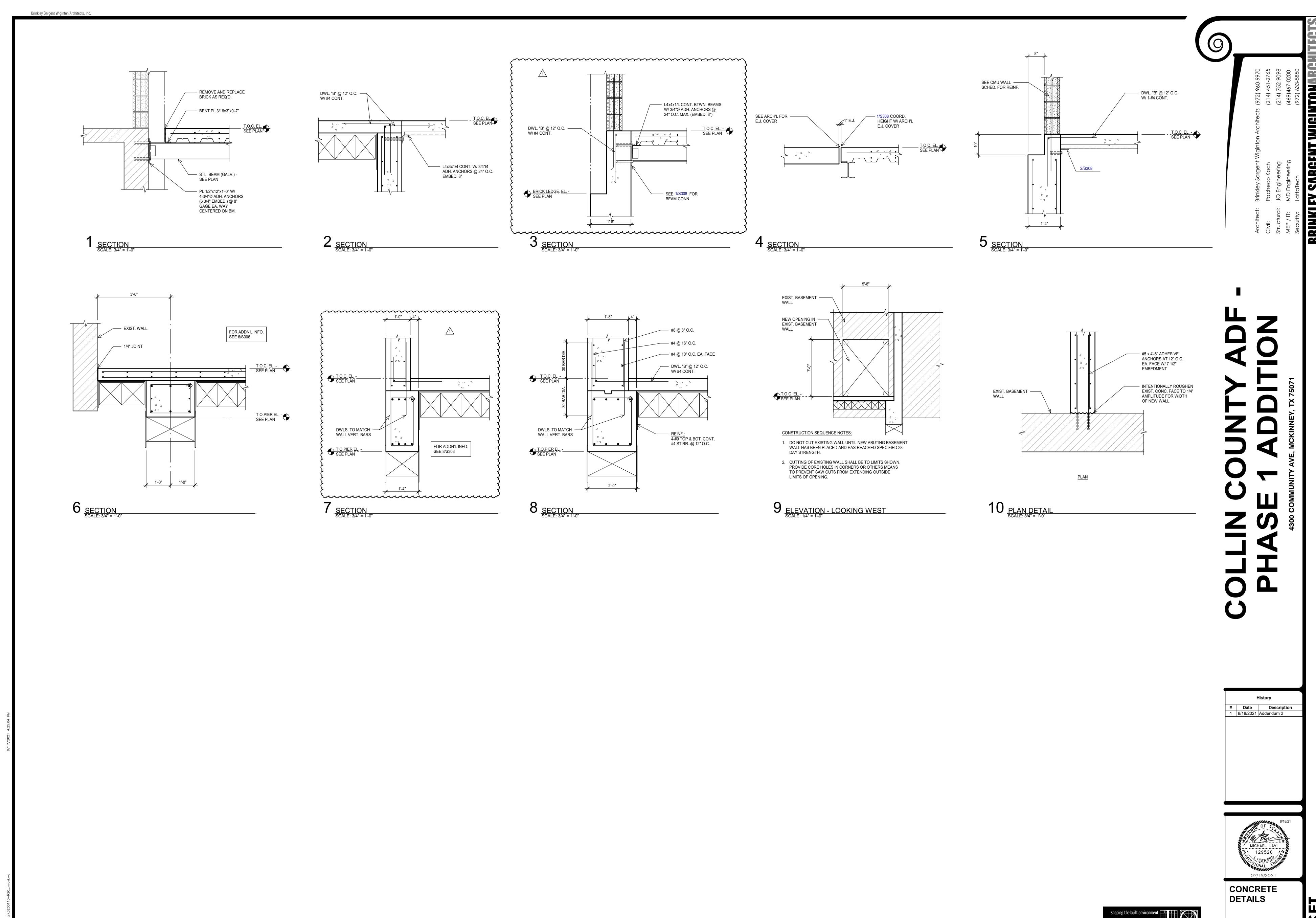
1. Retaining wall plan and elevation indicating wall extents and plan dimensions of drilled piers/piles. 2. Wall sections indicating pier/pile installation depth, shotcrete thickness and reinforcing, backfill requirements, and wall finish requirements.

Behind wall drainage system and drain pipe plan locations and elevations. Member material properties and shotcrete mix designs.

5 ELEVATION SCALE: 1/4" = 1'-0"

REQUIREMENTS.

SEE ARCH'L FOR -E.J. MATERIAL

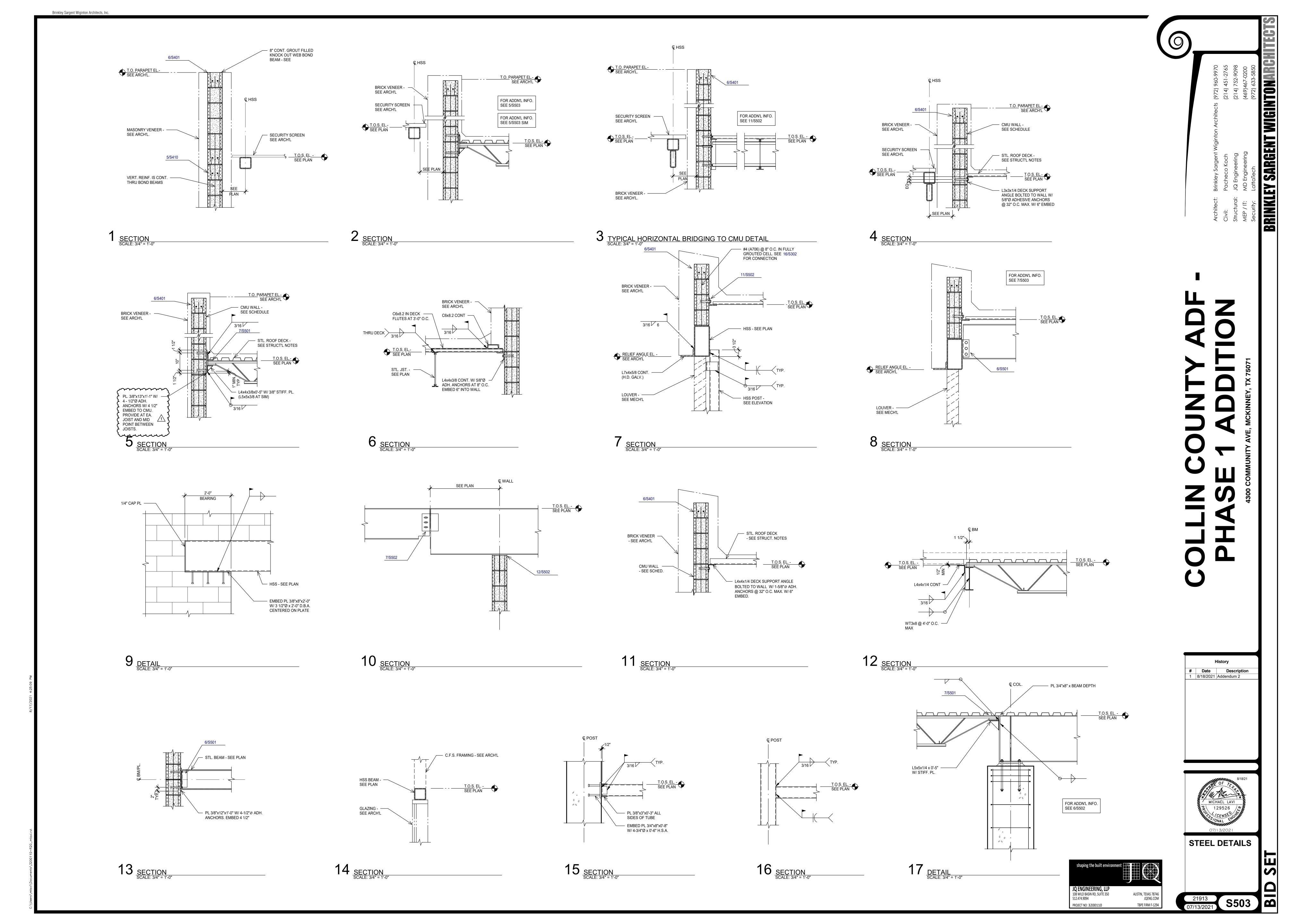


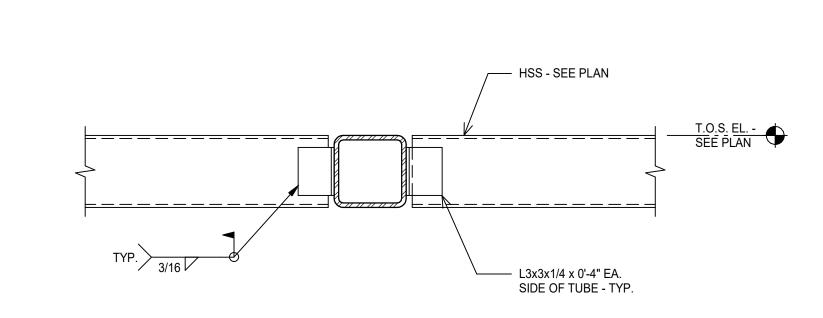
S308

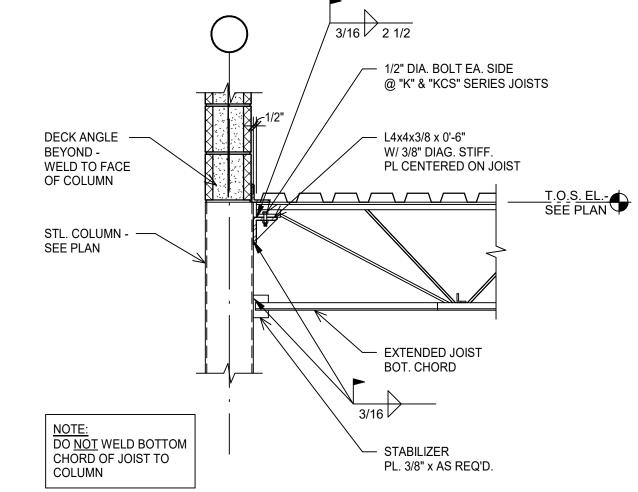
JQ ENGINEERING, LLP 108 WILD BASIN RD, SUITE 350 512.474.9094

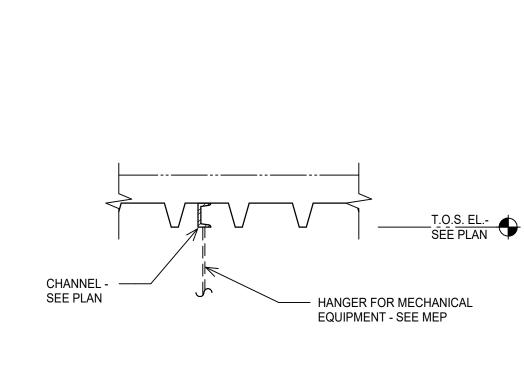
PROJECT NO: 3200110

AUSTIN, TEXAS 78746 JQENG.COM TBPE FIRM F-1294









5 <u>SECTION</u>
SCALE: 1" = 1'-0"

C6x8.2 IN DECK FLUTES. LOCATE AT EA. END OF HATCH OPENING.



STL. ROOF DECK -SEE STRUCTURAL

— HSS6x6x1/4 CONT.

NOTE: STOP TUBE AT INTERSECTING ROOF BEAMS

NOTES

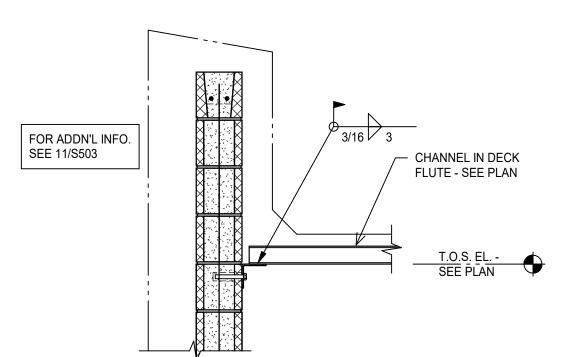


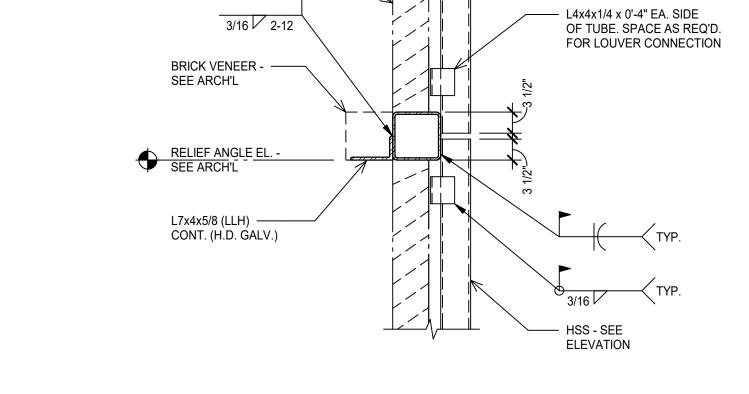
3/16

LOUVER - -

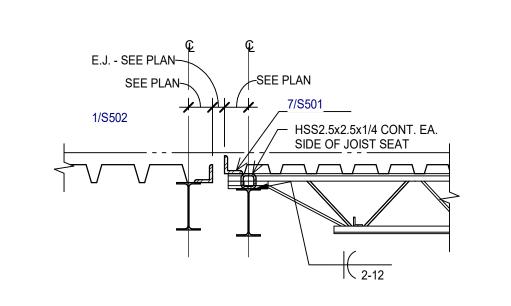
SEE MECH'L





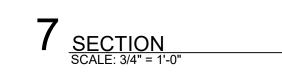


— HSS - SEE ELEVATION





6 <u>SECTION</u> SCALE: 3/4" = 1'-0"



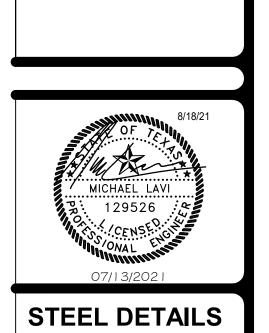


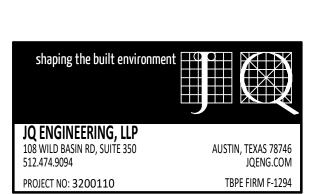
ROOF HATCH - SEE ARCH'L -

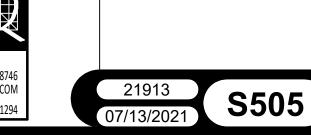
# COLLIN COUNTY ADF. PHASE 1 ADDITION

History

# Date Description
1 8/18/2021 Addendum 2

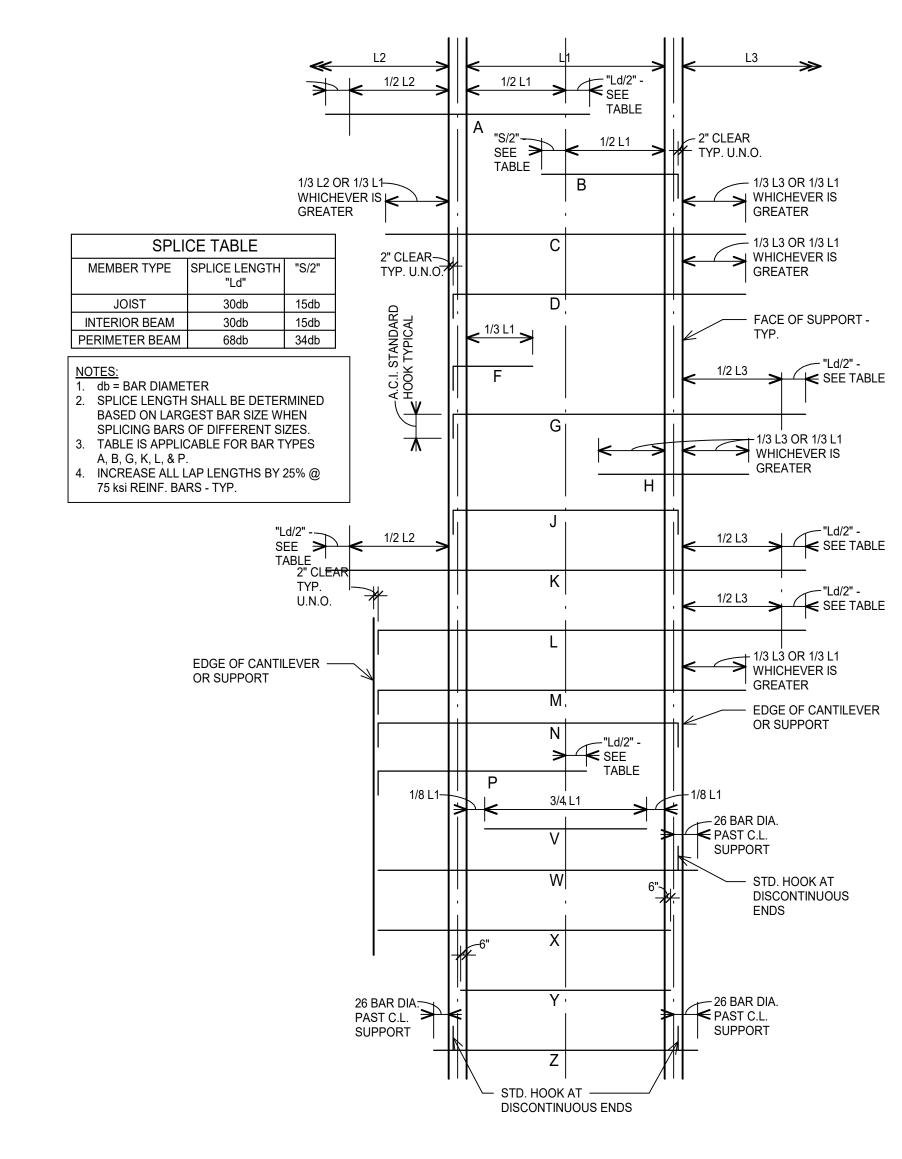




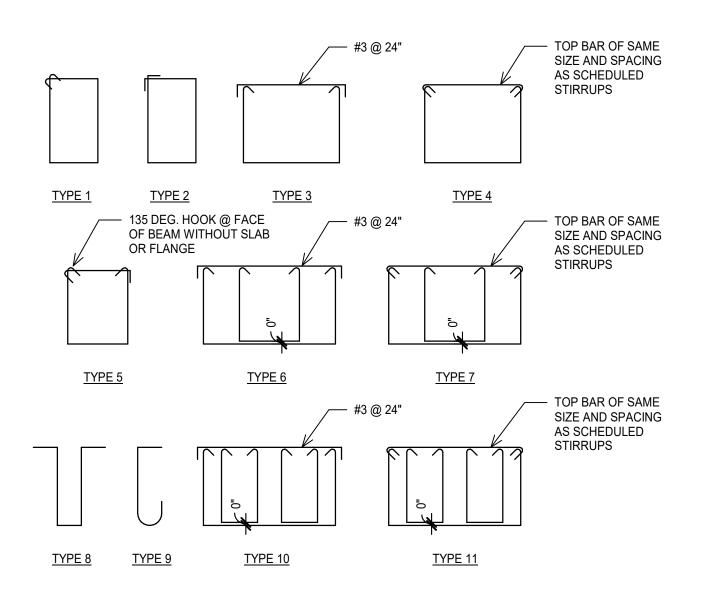


	CONCRETE BEAM SCHEDULE												
MARK	BEAM					REINFO	ORCING				EXTRA INTERM.		
	WIDTH	WIDTH 2	DEPTH	DEPTH 2	TOP BARS LEFT END	BOTTOM BARS CENTER	TOP BARS CENTER	TOP BARS RIGHT END	SIZE	TYPE	SPACING EACH END FROM SUPPORT FACE	BARS (E.F.)	REMARKS
	24"		28"		4-#5B	2-#8Z, 2-#8Y		4-#5B	4	4	1@2, R@12		
2	56"		28"		4-#5B, 4-#5F	3-#8Z, 3-#8Y		4-#8A, 4-#8H	4	7	1@2, R@10		
3	56"		28"	23 1/2"		3-#9Z, 3-#9Y		4-#9A, 4-#9H	4	7	1@2, 14@8, R@10		
4	56"		32"	18"		3-#9Z, 3-#9Y		4-#5B, 4-#5F	4	7	1@2, 16@6, R@10		
5	18"		32"	28"	3-#5B	3-#8Z		3-#8A	4	7	1@2, 16@6, R@10		
6	18"		32"			3-#8Z		3-#5B	4	4	1@2, R@12		
7	18"		28"		3-#5B	3-#8Z		3-#5B	4	4	1@2, R@12		
3	47"		32"	18"	4-#5B, 2-#5F	4-#8Z, 3-#8Y		5-#10A, 4-#10H	4	7	1@2, R@14		
9	47"		32"	18"		4-#8Z, 3-#8Y		4-#5B, 2-#5F	4	7	1@2, R@14		
10	50"		34 1/4"		4-#5B, 2-#5F	4-#10Z, 4-#10Y			4	7	1@2, 12@10, R@14	1-#6	
11	56"		32"			4-#8Z, 4-#8Y	5-#9K, 4-#9C		4	7	1@2, R@14		
12	56"		32"			4-#8Z, 4-#8Y		4-#8A, 4-#8H	4	7	1@2, R@14		
13	56"		32"			4-#8Z, 4-#8Y		4-#5B, 2-#5F	4	7	1@2, R@14		
14	48"		32"		4-#5B, 2-#5F	3-#10Z, 3-#10Y		4-#10A, 3-#10H	4	7	1@2, R@8	4-#8	
15	48"		32"			3-#9Z, 3-#9Y		4-#5B, 2-#5F	4	7	1@2, R@8	4-#8	
16	36"		40"		4-#5B, 4-#5F	4-#9Z, 2-#9Y		4-#9A, 4-#9H	4	7	1@2, R@12	1-#6 E.F. CONT.	
17	36"		40"			4-#9Z, 2-#9Y		4-#9A, 4-#9H	4	7	1@2, R@12	1-#6 E.F. CONT.	
18~~~~	50"	~~~~	40"~~	~~~~	~~~~~	4-#9Z 4-#9X		6-#10A 4-#10H	<del></del>	~~~~	1@2, R@14 1@2, R@14	1#6 E.F. CONT	
19	50"		40"			4-#10Z, 4-#10Y		6-9A, 4-#9H	4	7	1@2, R@14	1-#6 E.F. CONT.	
,20	<del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>		7-32	<del>~~~~</del>	<del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	4-#9Z, 4-#9Y		6-#5B, 4-#5F	<del>Jungun</del>	<del>~~~~</del>		<del>quille quille q</del>	
21	30"		34 1/4"		3-#5B, 3-#5F	3-#8Z, 3-#8Y		3-#5B, 3-#5F	4	7	1@2, R@8	3-#8	

						POST-TENSIC	NED	CON	CRETE BEAM SCI	HEDULE					
		BEAM			REINF	FORCING			STIRRUPS	EXTRA INTERM.		POST-TENSION	N REINFORCING		
MARK	WIDTH	WIDTH 2 DEPTH	DEPTH 2	TOP BARS LEFT END	BOTTOM BARS CENTER	TOP BARS CENTER TOP BARS RIGHT END	SIZE	TYPE	SPACING EACH END FROM SUPPORT FACE		P-T FORCE (Kips)	CGS @ LEFT (IN.) C	GS @ MIDSPAN (IN.) CGS @ F	RIGHT END (IN.)	REMARKS
<del></del>	51"	32"	23 1/2"	4-#8B, 4-#8F	4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12		700	14	3	19.5	
2	51"	32"	23 1/2"		4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12		700	19.5	3	25	
3	51"	32"			4-#8Z, 4-#8Y	4-#8B, 4-#8F	4	7	1@2, 3@8, R@12		700	25	16	16	
4	72"	32"	23 1/2"	5-#8B, 5-#8F	5-#8Z, 5-#8Y	5-#8A, 5-#8H	4	11	1@2, 3@8, R@12		900	14	3	19.5	
5	72"	32"	23 1/2"	, , , , , , ,	5-#8Z, 5-#8Y	5-#8A, 5-#8H	4	11	1@2, 3@8, R@12		900	19.5	3	25	
	72"	32"	20 1/2		5-#8Z, 5-#8Y	5-#8B, 5-#8F	4	11	1@2, 3@8, R@12		900	25	16	16	
•	48"	32"	23 1/2"	4-#8B, 4-#8F	4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12		550	14	3	19.5	
3	48"	32"	23 1/2"	4-#0D, 4-#0F	4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	7			550	19.5	3	25	
			23 1/2		<u> </u>	, ,	-	7	1@2, 3@8, R@12				3		
	48"	32"	00.4/0"	5 WOD 5 WOS	4-#8Z, 4-#8Y	4-#8B, 4-#8F	4	/	1@2, 3@8, R@12		550	25	16	16	
0	68"	32"	23 1/2"	5-#8B, 5-#8F	5-#8Z, 5-#8Y	5-#8A, 5-#8H	4	/	1@2, 3@8, R@12		850	14	3	19.5	
1	68"	32"	23 1/2"		5-#8Z, 5-#8Y	5-#8A, 5-#8H	4	7	1@2, 3@8, R@12		850	19.5	2.5	25	
2	68"	32"			5-#8Z, 5-#8Y	5-#8B, 5-#8F	4	7	1@2, 3@8, R@12		850	25	16	16	
3	51"	32"	23 1/2"	4-#8B, 4-#8F	4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12		500	14	3	19.5	
4	51"	32"	23 1/2"		4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12		500	19.5	3	25	
5	51"	32"			4-#8Z, 4-#8Y	4-#8B, 4-#8F	4	7	1@2, 3@8, R@12		500	25	16	16	
;	51 1/4"	32"		4-#8B, 4-#8F	4-#8Z, 4-#8Y		4	7	1@2, 3@8, R@12		250	16	3	22	
7	51 1/4"	32"		·	4-#8Z, 4-#8Y	4-#8K, 4-#8C	4	7	1@2, 3@8, R@12		250	22	3	22	
<u> </u>	51 1/4"	32"			4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12	1	250	22	3	22	
<del>)</del> )	51 1/4"	32"			4-#8Z, 4-#8Y	4-#8B, 4-#8F	4	7	1@2, 3@8, R@12	+	250	22	16	16	
	53"	28"	+	4-#8B, 4-#8F	4-#8Z, 4-#8Y	4-#65, 4-#6F 4-#8A, 4-#8H	4	7	1@2, 3@8, R@12 1@2, 3@8, R@12	+	525	16	4	23	
	53"	28"	+	<del>4-που, 4-πο</del> Γ	4-#6Z, 4-#6Y	4-#6A, 4-#6H	-	7		+	525	23	23	23	
			00"		,	,	4	1 7	1@2, 3@8, R@12	+	323	۷۵ ا	۷۵	۷۵	
	53"	32"	28"		4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	<del>                                     </del>	1@2, 3@8, R@12	+		1		10	
	53"	32"	1	- "	4-#8Z, 4-#8Y	4-#8B, 4-#8F	4	7	1@2, 3@8, R@12	1	525	22	16	16	
	61"	28"		5-#8B, 7-#8F	5-#8Z, 5-#8Y		4	11	1@2, 3@8, R@12		400	16	3	22	
	61"	28"			5-#8Z, 5-#8Y	7-#8K, 7-#8C	4	11	1@2, 3@8, R@12		400	22	22	22	
	61"	28"			5-#8Z, 5-#8Y	7-#8A, 7-#8H	4	11	1@2, 3@8, R@12		400	22	4.5	21	
	61"	32"	28"		5-#8Z, 5-#8Y	5-#8B, 5-#8F	4	11	1@2, 3@8 R@10						
	43"	28"		4-#8B, 3-#8F	4-#8Z, 3-#8Y		4	7	1@2, 3@8, R@12		250	16	4.5	18	
	43"	28"		,	4-#8Z, 3-#8Y	4-#8K, 7-#8C	4	7	1@2, 3@8, R@12		250	18	18	18	
	43"	28"			4-#8Z, 3-#8Y	4-#8A, 7-#8H	4	7	1@2, 3@8, R@12		250	18	3	18	
	43"	32"	28"		4-#8Z, 3-#8Y	4-#8, 3-#8F	4	7	1@2, 3@8, R@12		200	10		10	
	56"	28"	20	4-#8B, 4-#8F	4-#8Z, 4-#8Y	4-#0, 5-#0i	4	7	1@2, 3@8, R@12		575	16	3	24	
	56"	28"		4-#00, 4-#01	4-#8Z, 4-#8Y	4-#8K, 4-#8C		7			575	24	24	24	
					, ,	·	4	7	1@2, 3@8, R@12				24		
	56"	24"	20"		4-#8Z, 4-#8Y	4-#8A, 4-#8H	4	/	1@2, 3@8, R@12		575	20	3	20	
5	56"	32"	28"		4-#8Z, 4-#8Y	4-#8B, 4-#8F	4	/	1@2, 3@8, R@12						
i	48"	32"		4-#8B, 4-#8F	4-#8Z, 3-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12		350	14	3	25	
	48"	32"			4-#8Z, 3-#8Y	4-#8A, 4-#8H	4	7	1@2, 3@8, R@12		350	25	3	25	
	48"	32"			4-#8Z, 3-#8Y	4-#8B, 4-#8F	4	7	1@2, 3@8, R@12		350	25	16	16	
	54"	32"		4-#9B, 4-#9F	4-#9Z, 3-#9Y	4-#9A, 4-#9H	4	7	1@2, 16@8, R@12	4-#9	1000	16	3	21	
	54"	32"			4-#9Z, 3-#9Y	4-#9B, 4-#9F	4	7	1@2, 16@8, R@12	4-#9	1000	21	3	16	
	48"	34 1/4"		4-#9B, 3-#9F	4-#9Z, 3-#9Y		4	7	1@2, 32@6, R@12	4-#9	1450	18	3	28	
	48"	34 1/4"		,	4-#9Z, 3-#9Y	4-#9K, 3-#9C	4	7	1@2, 14@6, R@12	4-#9	1450	28	28	28	
	48"	34 1/4"			4-#9Z, 3-#9Y	4-#9B, 3-#9F	4	7	1@2, 26@6, R@12	4-#9	1450	28	5	18	
	54"	36"	+	4-#8B, 5-#8F	4-#8Z, 5-#8Y	4-#8A, 5-#8H	4	7	1@2, 3@8, R@12	, ,	800	20	16.5	29	1-#6 E.F. CONT.
	54"	36"	31 1/2"	1 1100, 0 1101	4-#8Z, 5-#8Y	4-#8A, 5-#8H	4	7	1@2, 3@8, R@12	+	800	29	3	29	1-#6 E.F. CONT.
	54"	40"	31 1/2"		4-#8Z, 5-#8Y	4-#6A, 5-#6H		7		+	800	29	2	25	1-#6 E.F. CONT.
			31 1/2		·	· · · · · · · · · · · · · · · · · · ·	4	7	1@2, 3@8, R@12	+			3		I-#U E.F. CUNT.
	54"	31 1/2"	0.4.4/0"		4-#8Z, 5-#8Y	4-#8A, 5-#8H	4	'	1@2, 3@8, R@12	1	800	25	3	25	4 40 5 5 00 5
	54"	40"	31 1/2"		4-#8Z, 5-#8Y	4-#8A, 5-#8H	4	/	1@2, 12@4, R@14	1	800	25	3	26	1-#6 E.F. CONT.
	54"	31 1/2"			4-#8Z, 5-#8Y	4-#8A, 5-#8H	4	7	1@2, 10@6, R@14		800	1 many	måmm	2 m	= -
	54"	40"			4-#8Z, 5-#8Y	4-#8A, 5-#8H	4	7	1@2, 3@8, R@12	1	800	\ 26	3	33.5 /1\  <b>3</b>	1-#6 E.F. CONT.
	54"	40"			4-#8Z, 5-#8Y	4-#8B, 5-#8F	4	7	1@2, 3@8, R@12		800				1-#6 E.F. CONT.
	60"	28"		4-#8B, 5-#8F	4-#8Z, 4-#8Y	4-#8A, 5-#8H	4	7	1@2, 3@8, R@12		800	1 1 23			
	60"	32"	28"	4-#8Z, 4-#8Y		4-#8A, 5-#8H	4	7	1@2, 3@8, R@12		800	3	23	$\frac{23}{23}$	
	60"	32"			4-#8Z, 4-#8Y	4-#8A, 5-#8H	4	7	1@2, 3@8, R@12		800	23	3	23	
	60"	32"			4-#8Z, 4-#8Y	4-#8A, 5-#8H	4	7	1@2, 3@8, R@12	1	800	23	9.25	23	
	60"	32"	1		4-#8Z, 4-#8Y	4-#8B, 5-#8F	4	7	1@2, 3@8, R@12	†	800	23	3	16	
	38"	32"	+	3-#8F, 2-#8B	2-#8Z, 2-#8Y	4-#8A, 3-#8H	4	7	1@2, 3@8, R@12	+	275	21	18	22	
	38"	32"	+	J-#UΓ, ∠-#0D	2-#8Z, 2-#8Y	4-#6A, 3-#6H	4	7		+	275	22	5.75	24	
					·	·		7	1@2, 3@8, R@12	+					
	38"	32"		0 1105 0 1105	2-#8Z, 2-#8Y	3-#8F, 2-#8B	4	1 7	1@2, 3@8, R@12	1	275	24	12	21	
	36"	32"		3-#8F, 2-#8B	3-#8Z, 2-#8Y	4-#8A, 3-#8H	4	7	1@2, 3@8, R@12	1	275	21.25	18.25	22 16 1	
	36"	32"			3-#8Z, 2-#8Y	5-#8F, 2-#8B	4	7	1@2, 3@8, R@12		275	22	4	16 /1)	
	51"	32"	18"	4-#8F, 4-#8B	2-#8Z, 3-#8Y	5-#8H, 2-#8A	4	7	1@2, 3@8, R@12		325	19.50	4	10	
	51"	32"	23 1/2"		2-#8Z, 4-#8Y	5-#8H, 2-#8A	4	7	1@2, 3@8, R@12		325	16	4	24	
	51"	32"			2-#8Z, 3-#8Y	4-#8, 2-#8B	4	7	1@2, 3@8, R@12		325	24	14	19.50	
	54"	32"		4-#8F, 4-#8B	4-#8Z, 4-#8Y	, =	4	7	1@2, 3@8, R@12	1	450	18	4	20	
	54"	32"	+	,	4-#8Z, 4-#8Y	4-#8K, 4-#8C	4	7	1@2, 3@8, R@12	+	450	20	20	20	
	54"	32"	18"		4-#8Z, 4-#8Y	4-#8H, 4-#8A	4	7	1@2, 3@8, R@12	+	450	20	4	24	
					· ·	·		7		+			·		
	54"	32"	18"		4-#8Z, 4-#8Y	4-#8H, 4-#8A	4	'-	1@2, 3@8, R@12	+	450	24	4	24	
	54"	32"			4-#8Z, 4-#8Y	4-#8H, 4-#8A	4	7	1@2, 3@8, R@12	1	450	24	4	24	
	54"		~~~~	<del>~~</del>	4-#8Z, 4-#8Y	4-#8H, 4-#8A	4	7	1@2, 3@8, R@12	1	450	24	4	24	
	54"	26"	24"	1\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	4-#8Z, 4-#8Y	4-#8H, 4-#8A	4	7	1@2, 3@8, R@12		450	16	4	16	
	54"	32	4- <del></del>		4-#8Z, 4-#8Y	4-#8F, 4-#8B	4	7	1@2, 3@8, R@12		450	24	4	20.25	



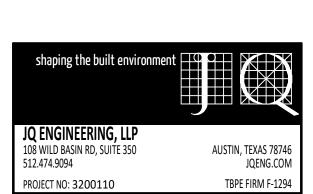
TYPICAL BAR BENDING DIAGRAM
NO SCALE



2 TYPICAL STIRRUP TYPES NO SCALE



CONCRETE BEAM SCHEDULE





# Date Description
1 8/18/2021 Addendum 2